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Course of Study

of the

Public Schools

of the

City of Superior,

Wisconsin,

1905.

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UC SOUTHERN REGIONAL LIBRARY FACILITY

OUTLINE
OF THE
COURSE OF STUDY
FOR THE
PUBLIC SCHOOLS
OF THE
CITY OF SUPERIOR,
WISCONSIN.

B. B. JACKSON, Superintendent.

1905.

Published by Direction of the
Board of Education.

The Dunn-Whipple Printing Co.,
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GRADES.

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PROGRAM AND TIME SCHEDULE.

Recitations in the First, Second, and Third Grades should be limited to twenty minutes; in the Fourth, Fifth, and Sixth to twenty-five minutes; and in the Seventh and Eighth to thirty minutes. Manual work may be continued for a slightly longer period.

In making programs, teachers should consider difficulty of subjects and fatigue periods of the pupils. Short periods with intense work, provided program admit of sufficient variation in kind of work, are productive of best results.

Reading—Twice daily in first and second grades; daily in other grades.

Word Drill—Separate, short and frequent in first two grades.

Phonics—Separate, short and frequent drills in first two grades; continued through all grades.

Thought and Expression—Aim of reading throughout the course, but mastery of printed forms through word-drill and phonics the only means in the lower grades.

Spelling—Short and frequent drill in all grades—phonics assisting in lower grades.

Language—Daily.

Observation—Separate, short, and frequent drill in first three grades—Daily.

Oral Language—Major part of work in the lower grades—Daily.

Written Language—Little in lower grades, amount increasing in the upper grades.

Arithmetic—Daily.

Sense Training—Separate, short, and frequent drill in first three grades.

Speller Blocks—Regular short and rapid work in lower grades. This with sense training the principal work of first two grades.

Numbers—Short periods, quick intense work—throughout the course.

Geography—Daily. This work partaking of nature work largely in first two grades and forming the correlating center for nature work of all the grades.

History—General lesson in first two grades. Daily in the other grades, length of period increasing with the upper grades.

Manual Training.

Drawing—Three periods of twenty minutes each per week, or in upper grades two periods of thirty minutes each.

Construction Work—Daily in lower grades; two periods per week in intermediate grades; and one period of shop work and sewing in Seventh and Eighth Grades.

COURSE OF STUDY

Pennmanship—Daily in lower grades; at least two periods per week in upper grades.

Music—Short daily periods in first three grades; three periods of twenty minutes each per week in other grades. Special chorus work outside regular periods.

Physical Culture—Daily exercises in all grades—short periods of real training.

General Lessons—At least one daily. Period of fifteen minutes.

History or Civics.

Literature.

Physiology.

Morals and Conduct.

Current Events.

These are to alternate with one another. In grades where any one is regularly taught that one is not to be considered one of the general lessons.

Recesses—One of ten minutes in each session in first three grades; one of ten to fifteen minutes during morning session in the other grades. All recesses should be out of doors when weather permits.

READING.

FIRST GRADE.

- 1 B.** Read: New Education Reader, Book One.
1 A. Read: New Education Reader, Book One.
Nature's By-ways—Ford.
Skyward and Back—Robinson.
First Readers.

Stories to be told or read to classes for oral reproduction and study. The following will be found helpful:

Whittier's Child Life, Scudder's Child's Book, Hawthorne's Wonder Book, and Tanglewood Tales, Hiawatha, Little Folks of Other Lands, Seven Little Sisters, Each and All, Little People of Asia, Stories of Old Greece, Nature Myths, Classic Myths, Cat Tails and Other Tales, Heart of Oak I., All the Year Round, Little Nature Studies, Parts I. and II., Storyland of Flowers, Stories of Long Ago, Fifty Famous Stories Retold, Hofer's Christ Tales, Flower Fables, Little Folks in Feathers and Fur, Emile Poulsson's In the Child's World, Wiltse's Stories and Morning Talks, Wiltse's Talks for Kindergartens and Primary Schools, Wiggins' The Story Hour, Harrison's Story Land.

SECOND GRADE.

- 2 B.** Read: New Education Reader, Book Two.
Plant Life—Bass.
In Maryland—Pratt.
Aesop's Fables—Pratt.
Bow-wow and Mew-mew—Craik.

Stories and readings: Lucy's Wonderful Globe.
Foulke's Twilight Stories.
Robinson Crusoe.
Big People and Little People of other Lands.
—Shaw.
Wee Doggie—Tralce.

- 2 A.** Read: New Education Reader, Book Three.
Animal Life—Bass.
Story Reader—Logie & Uecke.
Around the World—1 (Geog.)

Stories and Readings: Draw from the list suggested for 2 B.
Books of Legend Told Over Again—
Scudder.
Strange Adventures of Billy Trill—
Cheever.

THIRD GRADE.

- 3 B.** Read: Fable and Folk Stories—Scudder.
Fifty Famous Stories Retold—Baldwin.
Little Folks of Other Lands (Geog.)
Stories of Great Americans for Little Americans—
Eggleston (Hist.)

COURSE OF STUDY

Stories and Readings: Stories of Old Greece—Firth.
 My Saturday Bird Class—Miller.
 Among the Farm Yard People—
 Pierson.

- 3 A. Read:** Third Readers.
 Robinson Crusoe.
 Seaside and Wayside—1 (Geog.)
 Colonial Children—Pratt (Hist.)

Stories and Readings: Twelve Lessons on Kindness to Animals.
 Big Brother—Johnson.
 Stories of Indian Chieftains—Husted.
 My Woodland Intimates.

FOURTH GRADE.

- 4 B. Read:** Fairy Tales—Andersen.
 Stories of American Life and Adventure—Eggleston.
 Seaside and Wayside—II (Geog.)
 Viking Tales—Hall.

Stories and Readings: Black Beauty—Sewell.
 Adventures of a Brownie—Craik.
 Boys of Other Countries—Taylor.
 The Angel's Story—Adelaide Proctor.

- 4 A. Read:** Song of Hiawatha—Longfellow.
 Aesop's Fables—Stickney.
 Heart of Oak—II (Selections.)
 Ways of Wood-Folk—Long.

Stories and Readings: Old Greek Stories—Baldwin.
 Alice in Wonderland.
 Bird's Christmas Carol.
 Boyhood of Famous Americans.

FIFTH GRADE.

- 5 B. Read:** Wilderness Ways—Long.
 Water Babies—Chas. Kingsley.
 Seaside and Wayside—III.
 Ten Boys—Andrews.

Stories and readings: My Summer in a Garden—Warner.
 Child Stories from the Masters—
 Menefee.
 Arabian Nights—Hale.
 Songs of Labor—Whittier.
 Madam How and Lady Why—Kingsley.

- 5 A. Read:** King of the Golden River—Ruskin.
 Tales of Troy—DeGarmo.
 Heart of Oak—III. (Selections.)
 Wonder Book—Hawthorne.

Stories and Readings: Swiss Family Robinson.
 The Story of Roland—Baldwin.
 The Story of the Iliad—Church.
 The Story of the Odyssey—Church.
 Widow O'Callagan's Boys.
 Hoosier Schoolboy—Eggleston.
 Four Little Peppers and How They
 Grew—Sidney.

SIXTH GRADE.

- 6 B.** Read: Selections from Longfellow.—Riverside, Nos. 11 and 63.
Little Nell—Dickens.
Stories from Hawthorne.

Stories and Readings: See 5 A.

- 6 A.** Read: Birds and Bees and Sharp Eyes—Burroughs.
Tanglewood Tales—Hawthorne.
Snowbound—Whittier.

Stories and Readings: Hans Brinker—Mary Mapes Dodge.
The Story of Seigfreid—Baldwin.
Young America Abroad—Optic.

SEVENTH GRADE.

- 7 B.** Read: Tales of the White Hills—Hawthorne.
Miles Standish—Longfellow.
Sketch Book—Irving.
Christmas Carol—Dickens.

Stories and Readings: Tom Brown at Rugby—Hughes.
Tales of a Grandfather—Scott.

- 7 A.** Read: Evangeline—Longfellow.
Tales from Shakespeare—Pratt (or Lamb).
Grandfather's Chair—Hawthorne.
Heart of Oak—IV. (Selections.)

Stories and Readings: Mopsa, the Fairy.
Snow Image—Hawthorne.

EIGHTH GRADE.

- 8 B.** Read: Lady of the Lake—Scott.
A-Hunting of the Deer—Warner.
Peasant and Prince—Martineau.

Stories and Readings: Succession of Forest Trees and Wild
Apples—Thoreau.

- 8 A.** Read: The Deserted Village—Goldsmith.
Vision of Sir Launfal—Lowell.
The Merchant of Venice—Shakespeare.
Idylls of the King—Tennyson.

Stories and Readings: The Ancient Mariner—Coleridge.
Julius Caesar—Shakespeare.
Ivanhoe—Scott.

SUGGESTIONS.

In the first four grades particular attention should be given to the mechanics of reading, though the expression should not be slighted.

Observe two aims: Reading for drill and reading for the thought. The one gives rapid recognition of words and correct pronunciation, the other is necessary to good expression. Do not combine the two in one recitation. Select some portions for drill and some for thought.

In the Fourth Grade begin the use of the dictionary and other reference books, and insist upon their use throughout the course.

In the upper grades call attention to allusions, the choice of words and the figures of speech; compare the styles of the authors read.

Do not permit slovenly habits of reading.

Enter into the spirit of the reading of the pupils.

Have frequent reproductions of passages read.

Require definite preparation for the reading lesson.

Try to inspire a love for good literature, and direct the home reading of the pupils.

Give frequent voice training; require pupils to speak clearly and distinctly.



LANGUAGE.

Basic Principles for the Language Work of the First, Second and Third Grades.

I. Environment is a factor of special importance in the training of children.

The child should become familiar with his environment—to this end that his senses should be definitely trained so that his information may be definite and accurate. This lays a foundation for language.

1. There should be an in-gathering of language material from myth, story, history, nature:

Orpheus the type of the great musician.
Hercules typical for strength.
Nero for cruelty.
Lincoln for honesty.
Bee and ant for industry.
Lily for purity—whiteness.

Stories and material selected for a definite purpose.

Stories that arouse certain emotions.

Stories—courage, obedience, honesty, etc.

2. Sentences expressing facts in different ways:

The flower is white.
The flower is the color of snow.
The flower is the color of silvery clouds.
The flower is the color of wool.
The flower is the color of foam.
The boy is small.
The boy is little.
My book is new.
My book is not old.
Three times four are twelve.
Three fours are twelve.
Four multiplied by three equals twelve.

Opportunities for this work arise constantly in second and third grades.

Nearly every short sentence is material.

3. Sentences for choice:

The silvery waves were beautiful.
The white waves were beautiful.
Her sunny locks hang on her temple like a golden fleece.
Her yellow locks hang on her temple like a golden fleece.
The apple is large.
The apple is big, etc.

II. "Environment must afford sufficient stimuli to develop the senses and give room for sufficient motor action in the growing nervous system."

1. Observation lesson.

(a) Those having in mind the definite training of the senses rather than the getting of information. Developing power of observation, the real point,—knowledge used as a test of the former. It is important that teachers aim for the thing here, training not knowledge.

(b) Those having in mind the discovering of relations between objects. In this series of lessons two or more objects would always be under consideration. These are in the main the classes of relation:

- a. General relations.
- b. Similarities.
- c. Differences.

Material is always at hand for there are always two or more objects present that may be used—two boys—two girls—two blackboards, etc.

2. Correct imaging—after observing.

"Normal culture would see that the images of all the senses were equally distinct."

(a) Summon visual images, for example, of

Rose, daisy, clover, geranium, daffodil, crocus, marigold, violet, lilac, apple, peach, pear, hawthorn, and laurel blossoms, evening cloud, thunder cloud, full moon, quarter moon, the face of a friend, the color of his hair and eyes, a red, green and yellow apple, the bluish tinge on a cluster of grapes, a fish, lobster, cat, horse, lamb, cow, dog, rooster, duck, goose, a mountain, hill, landscape, a stream with varying vegetation along its bank, the constellations of the stars, the varying surface of the ocean, a snow bank, snowflakes.

(b) Endeavor to revive the sensations had on touching, for example:

Snow, files, the edge of a knife, feathers, glass, molasses, cotton, linen, velvet, wool, fur, dough, ice, water, putty, pitch.

(c) After repeatedly tasting see how distinctly can be recalled the taste, for example, of

Chicken, duck, lemon, strawberry, raspberry, pineapple, peach, honey, sugar, molasses, vinegar, castor oil, oysters, veal, beef, mutton, pear, sour apple, sweet apple, custard, chocolate, maple syrup, turnip, celery, mustard, pepper, radishes, jelly.

(d) After carefully experimenting with each one, see how distinctly can be recalled the odor, for example, of

The rose, the honeysuckle, the new-mown hay, the lilac, the geranium leaf, the daisy, pennyroyal, turpentine, tansy, the hyacinth, the carnation, the blossoming orchard.

(e) Recall the

Moaning of the pines; cackling of domestic fowl; songs of birds; e. g. robin, canary, oriole, thrush; sound of the flute, harp, violin, piano, organ; cry of the owl, ringing of a bell, bussing of bees, whistle of a locomotive, bleating of sheep, barking of dogs, neighing of horses, lowing of kine, whir of a circular saw, voice of various friends.

In connection with these lessons many definite things may be mastered and new words learned:

Terms for position—top, bottom, middle, center, corner, etc.
For direction—North, south, right, left, etc.

3. Correcting language of habit.

Sentences should be placed upon board and attention given to them daily for a long period of time. Determined by results upon pupils themselves. Faithfulness and perseverance must characterize this work.

May I take your book,—pen,—hat?

I saw him do it,—her,—them.

He did his work well.

He did it. I did it. We did it, etc.

These boys are playing.

We came in early.

He sat down.

He set the pail on the table.

These and others should be gone over enough times so that they will present themselves when the idea arises.

The language constants, however, must be kept in mind, and the real tests be based upon them. Avoid making the tests on the basis of information.

FIRST GRADE.

I. Familiarize pupil with his environment.

1. Gather information from myth, story, nature and the world about him.
2. Develop power of observation—training the object; knowledge and language, the test.
3. Develop correct imaging—training the object; language, the test.
4. Develop emotion and expression.

The above includes work with Speer blocks and abundance of other material. Have variety but not such as to lead to confusion and indefiniteness.

All sensing and imaging must be definite and accurate.

As this work is the basis of all language work, the language must be definite and accurate.

II. The sentence in its simplest form.

III. Variety of expression.

1. Sentences expressing facts in different ways.
2. Sentences for choice.

IV. Correcting language of habit—this means daily attention and drill.

V. Marks of sentences: capital and period to indicate beginning and end of sentences.

VI. Other marks:

1. Child's own name, and its substitutes "I" etc.
2. Names of other persons and of places.

VII. Use of "is" and "are," "was" and "were."

VIII. Large and small A, B, C, etc.

Written composition requirement—A single simple sentence.

SECOND GRADE.

I. See First Grade I. Extend work, keeping in mind the object.

II. The simple sentence enlarged.

III. Variety of expression. See First Grade III. Extend this work.

- IV. Correcting language of habit; more attention and drill.
- V. See First Grade V.
- VI. See First Grade VI. Extend to include
 - 3. Child's address, and abbreviations involved; initials.
 - 4. Dates: days of week; months.
 - 5. Distinguish prose and poetry, rhyme, verse; begin each line of poetry with capital.
 - 6. Asking sentences and question mark.
 - 7. Write, if progress warrants, the simplest form of letter a few times; address envelope to parent; write dedication of gift.
 - 8. Distinguish in Reader, paragraph (sentence group) chapter, section, verse.
 - 9. Apostrophe, discriminated and used—chiefly as marking singular possessive noun.
 - 10. Quotation marks in dialogue as convenience to indicate where each speaker begins and ends.
- VII. See First Grade VII. Use of "has" and "have."
- VIII. Learn the A, B, C's.

Written composition requirement—A few simple sentences.

THIRD GRADE.

- I. See First Grade I. Further extend this work, keeping in mind the object.
 - II. The simple sentences further enlarged.
 - III. Variety of expression. See First Grade III. Further extend this work.
 - IV. Correcting language of habit; give more and more attention and drill to this.
 - V and VI. See First Grade V and VI and Second Grade V and VI. Comma, as a new need, chiefly to separate series of nouns (name words) common and proper, and nouns of address.
 - 11. Apostrophe in contractions.
 - 12. Singular and plural.
 - 13. Quotation marks—broken quotations explained.
 - 14. Exclamation point.
 - 15. Titles of books, poems, stories, railroads, etc., and capitalization.
 - 16. Margins observed.
 - 17. Indentation in paragraphs, lines of verses, addresses, and parts of letters.
 - 18. Simple letter writing, using note paper. Address envelopes. New abbreviations.
 - VII. Use of "this," "these," "that," "those," "there," "their," and of pronouns.
 - VIII. Review A, B, C, etc.
- Written composition requirement—A few simple sentences somewhat enlarged and grouped.

FOURTH GRADE.

- 4 B—Woodley's Foundation Lessons in English, Book I to page 44.
- 4 A—Woodley's Foundation Lessons in English, Book I to page 93.

FIFTH GRADE.

5 B—Woodley's Foundation Lessons in English, Book I to page 144.

5 A—Woodley's Foundation Lessons in English, Book I, completed.

SIXTH GRADE.

6 B—Woodley's Foundation Lessons in English, Book II to page 60.

6 A—Woodley's Foundation Lessons in English, Book II to page 123.

SEVENTH GRADE.

7 B—Woodley's Foundation Lessons in English, Book II to page 188.

7 A—Woodley's Foundation Lessons in English, Book II, completed.

EIGHTH GRADE.

8 B—Metcalf's English Grammar, Part I.

8 A—Metcalf's English Grammar, Part II.

Composition in hands of the teacher—Maxwell & Johnson's School Composition.

SUGGESTIONS.

While all lessons in school should be lessons in language, do not nag the pupil or stifle free expression of thought. Cultivate in the pupil careful sensing, clear thinking, and fluent expression.

In composition writing be sure the pupil has material both of facts and of forms of expression.

Throughout the course, study selections for thought and expression. Memorize prose and poetry selections. Constantly recall those previously memorized.

In the lower grades give particular attention to sentence-making; in the upper grades to paragraph-making.

In Eighth Grade, one lesson a month should be given to letter writing, and at least two compositions written by the pupils.

ARITHMETIC.

FIRST GRADE.

- 1 B.—Sense-training—imagining and visualizing. See “Basic Principles for the Language Work.”

Relations as perceived by the senses—(a) of color; (b) of form; (c) of position; (d) of

Magnitude:

Indefinite relations: Larger, smaller, largest, smallest; longer, shorter, longest, shortest; taller, shorter, tallest, shortest; higher, lower, highest, lowest; heavier, lighter, heaviest, lightest; more, less, most, least; etc.

Definite relations: Ratio 1, or equality; ratio, 2 and $\frac{1}{2}$.

Use first solids; then surfaces; and then lines. Objects about the school, blocks, tablets, sticks, and drawings furnish material.

Construction—building, cutting, and drawing.

Teacher should study “Mathematics—Definite Relations,” pages 7-36, Speer’s Primary Arithmetic and note suggestions as to method of presentation, pages 37-68.

- 1 A.—See outline for 1 B. and review.

Continue the sense-training.

Definite relations of magnitude:

- (a) Ratio 1, or equality.
- (b) Ratios 2 and $\frac{1}{2}$.
- (c) Ratios 3, 1-3, 2-3, and 3-2.
- (d) Ratios, 4, 1-4, 3-4, and 4-3.

In teaching the ratio 1, use these terms:

1, 2, $\frac{1}{2}$, 3, $\frac{1}{3}$, $\frac{2}{3}$, 4, $\frac{1}{4}$, $\frac{2}{4}$, $\frac{3}{4}$, 5, 6, 7, 8, 9, 10, 11, 12.

1, 2, $\frac{1}{2}$, 3, $\frac{1}{3}$, $\frac{2}{3}$, 4, $\frac{1}{4}$, $\frac{2}{4}$, $\frac{3}{4}$, 5, 6, 7, 8, 9, 10, 11, 12.

In teaching the ratios, 2 and $\frac{1}{2}$, use these terms:

1, 2, 4, 6, 8, 10, 12.

$\frac{1}{2}$, 1, 2, 3, 4, 5, 6.

In teaching the ratios 3, $\frac{1}{3}$, $\frac{2}{3}$ and $\frac{3}{2}$, use these terms:

1, 3, 6, 9, 12.

1-3, 1, 2, 3, 4.

In teaching the ratios 4, $\frac{1}{4}$, $\frac{3}{4}$ and $\frac{4}{3}$, use these terms:

1, 2, 4, 8, 12,

$\frac{1}{4}$, $\frac{3}{4}$, 1, 2, 3.

Counting to 100.

Construction—building, cutting, and drawing.

Teachers should study “Mathematics—Definite Relations,” pages 7-36, Speer’s Primary Arithmetic and note suggestions as to method of presentation, pages 37-117.

SECOND GRADE.

2 B.—See outline for First Grade and review.

Continue the sense-training.

Definite relations of magnitude:

- (a) Ratio 1, or equality.
- (b) Ratios 2 and $\frac{1}{2}$.
- (c) Ratios 3, $\frac{1}{3}$, $\frac{2}{3}$ and $\frac{3}{2}$.
- (d) Ratios 4, $\frac{1}{4}$, $\frac{3}{4}$ and $\frac{4}{3}$.
- (e) Ratios 5, $\frac{1}{5}$, $\frac{2}{5}$, $\frac{3}{5}$, $\frac{4}{5}$ and $\frac{5}{4}$.

In teaching the ratio 1, continue with these terms:

11, 12, 13, 14, 15, 16, 17, 18, 19, 20.

11, 12, 13, 14, 15, 16, 17, 18, 19, 20.

In teaching the ratios 2 and $\frac{1}{2}$, continue with these terms:

14, 16, 18, 20, 22, 24, 26, 28, 30.

7, 8, 9, 10, 11, 12, 13, 14, 15.

In teaching the ratios 3, $\frac{1}{3}$, $\frac{2}{3}$ and $\frac{3}{2}$, continue with these terms:

12, 15, 18,

4, 5, 6.

In teaching the ratios 4, $\frac{1}{4}$, $\frac{3}{4}$ and $\frac{4}{3}$, continue with these terms:

12, 16, 20,

3, 4, 5.

In teaching the ratios 5, $\frac{1}{5}$, $\frac{2}{5}$, $\frac{3}{5}$, $\frac{4}{5}$ and $\frac{5}{4}$, use these terms:

1, 5, 10, 15, 20, 25,

1-5, 1, 2, 3, 4, 5.

Continue developing ratio 1, or equality, by the following equations:

1	2	2	3	4	3	3	5	4	6	5	4	4	7	6	5
1	1	2	1	1	2	3	1	2	1	2	3	4	1	2	3
2	3	4	4	5	5	6	6	6	7	7	7	8	8	8	8
8	7	6	5	5		9	8	7	6						
1	2	3	4	5	1	2	3	4							
9	9	9	9	10	10	10	10	10							

- (f) Ratios of inch, foot and yard; of pint, quart, and gallon; of month and year; of cent, nickel and dime; of dime and dollar.

Counting by twos, fours and fives to 20, and tens to 100.

Construction—building, cutting and drawing.

Teachers should study "Mathematics—Definite Relations," pages 7-36, Speer's Primary Arithmetic and note suggestions as to method of presentation, pages 69-117.

2 A.—See outline for 2 B. and review.

Continue the sense-training.

Definite relations of magnitude:

- (a) Ratio 1, or equality.
- (b) Ratios 2 and $\frac{1}{2}$.
- (c) Ratios 3, $\frac{1}{3}$, $\frac{2}{3}$ and $\frac{3}{2}$.
- (d) Ratios 4, $\frac{1}{4}$, $\frac{3}{4}$ and $\frac{4}{3}$.
- (e) Ratios 5, $\frac{1}{5}$, $\frac{2}{5}$, $\frac{3}{5}$, $\frac{4}{5}$ and $\frac{5}{4}$.
- (f) Ratios of 6, $\frac{1}{6}$, $\frac{2}{6}$, $\frac{3}{6}$ and $\frac{6}{5}$.
- (g) Ratios of 8, $\frac{1}{8}$, $\frac{3}{8}$, $\frac{5}{8}$ and $\frac{7}{8}$.

In teaching the above ratios, use all numbers to 20 and all divisible numbers to 50.

Continue developing ratio 1, or equality, by the following equations:

10	9	8	7	6	6	9	8	7	9	8	7	7
1	2	3	4	5	6	3	4	5	4	5	6	7
—	—	—	—	—	—	—	—	—	—	—	—	—
11	11	11	11	11	12	12	12	12	13	13	13	14
9	8	9	8	8	8	9	9	9	9	10		
5	6	6	7	8	7	8	8	9	9	10		
—	—	—	—	—	—	—	—	—	—	—		
14	14	15	15	16	16	17	18	20				

If these equalities, or facts of addition, are taught properly, the pupil will, at the same time, acquire a knowledge of the corresponding facts of subtraction; thus, if it is clear to the pupil that 7 and 5 are 12, he will also know that 12 less 7 are 5, and that 12 less 5 are 7.

Make sure that the pupils know the following equalities:

2 twos=4	3 twos=6	4 twos=8	5 twos=10	6 twos=12
2 threes=6	3 threes=9	4 threes=12	2 fours=8	3 fours=12
2 fives=10	2 sixes=12	2 sevens=14	2 eights=16	2 nines=18
2 tens=20	3 fives=15	4 fives=20	4 fours=16	3 sixes=18

If these equalities or facts of multiplication are taught properly, the pupil will, at the same time, acquire a knowledge of facts of division; thus, if it is clear to him that 3 twos are 6, it must be equally clear that 6 is 3 twos; or, to use the ordinary mathematical expression of this fact, that 2 is contained in 6 three times.

These facts of multiplication will also give other facts of division.

$\frac{1}{2}$ of 4=2	$\frac{1}{3}$ of 6=2	$\frac{1}{4}$ of 8=2	$\frac{1}{5}$ of 10=2
$\frac{1}{2}$ of 12=6	$\frac{1}{3}$ of 9=3	$\frac{1}{3}$ of 9=3	$\frac{1}{4}$ of 12=3
$\frac{1}{2}$ of 8=4	$\frac{1}{3}$ of 12=4	$\frac{1}{2}$ of 10=5	$\frac{1}{3}$ of 12=6
$\frac{1}{2}$ of 14=7	$\frac{1}{3}$ of 15=5	$\frac{1}{2}$ of 20=10	$\frac{1}{2}$ of 14=7
$\frac{1}{5}$ of 15=3	$\frac{1}{4}$ of 20=5	$\frac{1}{2}$ of 16=8	$\frac{1}{3}$ of 18=9
$\frac{1}{3}$ of 20=4	$\frac{1}{4}$ of 16=4	$\frac{1}{3}$ of 18=6	$\frac{1}{10}$ of 20=2
$\frac{1}{8}$ of 16=2	$\frac{1}{6}$ of 18=3		

4 is $\frac{2}{3}$ of 6	6 is $\frac{2}{3}$ of 9	8 is $\frac{2}{3}$ of 12	6 is $\frac{2}{3}$ of 9
9 is $\frac{3}{2}$ of 6	4 is $\frac{2}{3}$ of 10		

Squares of 2, 3, 4, 5 and roots of 4, 9, 16, 25.

Counting by 1 to 1000, by twos and fives to 100, and by threes and fours to 24.

Construction—Building, cutting and drawing.

Teacher should study "Mathematics—Definite Relations," pages 7-36, Speer's Primary Arithmetic and note suggestions as to method of presentation, pages 69-154. Chapter I, Walsh's New Primary Arithmetic, in the hands of the teacher, will furnish the teacher additional material.

THIRD GRADE.

3 B.—Review the forty-five essential facts of addition (and subtraction). Walsh's New Primary Arithmetic, Chapter I.

Multiplication and division by 2, 3, 4 and 5; notation and numeration; U. S. money; pint, quart, and gallon; fractional parts $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$, $\frac{1}{8}$; Roman notation. Walsh's New Primary Arithmetic, Chapter II.

Teacher should be thoroughly familiar with the work of the two preceding grades and continue the ratio idea of number.

- 3 A.—Multiplication and division by 6, 7, 8, 9, 10; ounce and pound; halves, thirds and fourths; notation and numeration; multiplication by mixed number; squares and rectangles. Walsh's New Primary Arithmetic, Chapter III.

FOURTH GRADE.

- 4 B.—Multipliers and divisors of two or more figures; multipliers containing fractions; addition and subtraction of easy mixed numbers; inch, foot and yard; areas of rectangles. Walsh's New Primary Arithmetic, Chapter IV.
- 4 A.—Multipliers and divisors of three or more figures; addition and subtraction of easy fractions; multiplication by a mixed number; easy denominate numbers; areas of rectangles. Walsh's New Primary Arithmetic, Chapter V.

FIFTH GRADE.

- 5 B.—Mixed numbers; notation and numeration; decimals to three places; U. S. money; time, dry and liquid measures and avoirdupois weight; area of rectangles; simple bills; reviews. Walsh's New Grammar School Arithmetic, Part One, Chapter I.
- 5 A.—Divisors and multiples; fractions; cancellation; multiplication and division of decimals; fractional parts of a dollar; reduction, addition, subtraction, multiplication and division of denominate numbers; areas and surfaces; bills; review. Walsh's New Grammar School Arithmetic, Part One, Chapter II.

SIXTH GRADE.

- 6 B.—Notation and numeration, reduction, addition, subtraction, multiplication and division of decimals; U. S. money; reduction, addition, subtraction, multiplication and division of denominate numbers; areas of rectangles and right-angled triangles; bills; percentage; simple interest; review. Walsh's New Grammar School Arithmetic, Part One, Chapter III.
- 6 A.—Denominate numbers; application of percentage; simple interest; areas of rectangles; square measure; solid contents; cubic measure; surface of rectangular solids; angles; triangles; quadrilaterals; review. Walsh's New Grammar School Arithmetic, Part One, Chapter IV.

SEVENTH GRADE.

- 7 B.—Finding percentage, base and rate; commission, insurance, duties, taxes briefly considered; profit and loss; commercial discount; interest; partial payments (U. S. rule only); bank discount of non-interest bearing notes. Walsh's New Grammar School Arithmetic, Part Two, Art. 301-329, 332-343, 355-356.

Exercise in Geometry—Lines and angles. Art. 619-630.

Denominate numbers and review. Art. 357-390.

- 7 A.—Ratio and proportion; partnership; review. Walsh's New Grammar School Arithmetic, Part Two, Art. 391-409, 461-462, 466-467.

Stocks and bonds, Art. 468, 469, 472; the ordinary bank draft and check, express and postal money orders as means of exchange; compound interest, Art. 483-484.

Metric system, noting only these terms: meter, decimeter, centimeter, millimeter, kilometer; square and cubic centimeter and meter; liter and hectoliter; gram and kilogram. Art. 486-496.

Review: Art. 497-511, 514-515.

EIGHTH GRADE.

8 B.—Involution and evolution; square root and applications. Walsh's New Grammar School Arithmetic, Part Two, Art. 410-431. Algebraic Equations. Art. 516-617.

8 A.—General Review. Hull's Complete Arithmetic. McNeill's Mental Arithmetic..

Exercises in Geometry. Walsh's New Grammar School Arithmetic, Part Two, Art. 631-640, 618, 432-460.

SUGGESTIONS.

Follow closely arrangement of the work in Walsh. If teachers feel the need of additional work in a subject give from other texts. Do not anticipate any of the advanced work in a subject.

Teachers of all grades should read McLellan & Dewey's Psychology of Number and familiarize themselves with the principles of the Speer method.

Make prominent in all the work the idea that number is ratio. Do not always make one or unity the unit of measure.

Have pupils do intelligent counting, making more of it than calling numbers by name.

In all grades do much actual measurement and illustrate with drawings; train pupils in making estimates and approximations.

Put great emphasis upon the meaning of problems, and have them frequently graphically illustrated.

Follow "Order of Procedure in Training for Arithmetical Power" (Werner Arithmetic.):

"Step I. Since arithmetic is concerned mainly with the comparison of measured magnitudes and their numerical expression, it is of prime importance that the work should begin in the actual comparison and measurement of sentient objects.

"Step II. Since by far the greater part of the actual work in arithmetic must be done without the presence of the sense magnitudes compared, it is equally important that the pupil should early learn to image measured magnitudes and to compare the images of measured magnitudes.

"Step III. Since most of the magnitudes compared by the mathematician never have been to him objects of sense perception, and some of them never can be, it is no less important that the pupil should be constantly trained in the creation of the imaginary measured magnitudes."

Teach partition as well as division.

Give much attention to factors and multiples.

Be sure the pupils understand division of fractions by reducing to a common denominator before they are permitted to invert and multiply.

In division always place the quotient above the dividend and be sure each digit of the quotient is placed above the proper one of the dividend.

Permit pupils at no time to get the idea that there is any difference between fractions and percentage.

HISTORY.

FIRST GRADE.

Stories and Dramatization of

1. Occupations of men and modes of living.
2. Special days: Thanksgiving, Christmas, Washington's Birthday, Memorial Day, etc.
3. Life and times of the Indians, the Pilgrims, the Quakers, Capt. John Smith, Miles Standish, Washington, Lincoln, etc.

SECOND GRADE.

Stories and Dramatization of

1. Modes of travel and industries.
2. Special days.
3. Life and times of Franklin, Fulton, Watt, Morse, Edison, etc.
4. Hiawatha and early days on Lake Superior.

THIRD GRADE.

3 B.—Old Stories of the East—Baldwin. Read by teacher.

Stories of Great Americans for Little Americans—Eggleston.
Read by pupils.

3 A.—Old Greek Stories—Baldwin. Read by teacher.

Colonial Children—Pratt. Read by pupils.

FOURTH GRADE.

4 B.—Wallach's Historical and Biographical Narratives. Read by teacher.

Stories of American Life and Adventure—Eggleston. Read by pupils.

4 A.—Rolfe's Tales of Chivalry. Read by teacher.

First Book in American History—Eggleston. Read by pupils.

FIFTH GRADE.

5 B.—PRIMITIVE MAN.

Man's development considered in its physical, intellectual and governmental aspects.

1. Man of Rough Stone Age.

- a. Where he lived.
- b. How he lived, house, food, clothes, etc.
- c. The need of weapons.
- d. Kind of weapons.
- e. How he made them.
- f. Animals he used them against.
- g. Plants as they then existed.
- h. Why the large plants and animals gave way to smaller ones.
- i. How he got his wife.

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- j. How he discovered the use of a boat.
 - k. How he made a boat.
 - l. How he learned to draw.
2. Man of Polished Stone Age.
- a. How man came to polish stones.
 - b. Why he made better weapons.
 - c. Invention of knife and spear.
 - d. How he made a better house.
 - e. How he made a better boat.
 - f. How he tamed his dog.
 - g. How he learned to paint.
 - h. How he discovered the use of fire.
 - i. How he discovered the art of fire making.
3. Man of Bronze Age.
- a. How bronze was discovered.
 - b. How this discovery changed his weapons.
 - c. How it helped him to live better.
 - d. How he tamed his cattle.
 - e. How the acquisition of herds made him settle down.
 - f. Why villages were built.
 - g. Why government was necessary.
 - h. Kind of government organized.
 - i. How he made pottery.
 - j. Why lake dwellings were built.
4. Agricultural Stage.
- a. How he came to plant grain.
 - b. Where he got the grain.
 - c. How cattle raising and grain planting civilized him.
 - d. How he manufactured his implements.
 - e. How he improved in methods of farming.
 - f. Why he built churches.
 - g. Why he prayed.
5. Grecian and Roman Stage.
- a. Discovery of iron.
 - b. How this discovery changed his weapons and manner of living.
 - c. His ideas of building considered to see where he got his ideas of architecture and how much he copied nature.
 - d. Discovery of new foods.
 - e. Discovery of new drinks.
 - f. Why theaters came to be built.
 - g. How statues were evolved from drawings and carvings.
 - h. Increase of commerce and how this affected civilization and government.
 - i. How physical features of a country determined in part the kind of government in these countries and how it affects it in all countries.

References:

Clodd's Primitive Man.
Waterloo's The Story of Ab.
Dopp's The Tree Dwellers.
The Early Cave Men.
The Later Cave Men.
The Tent-Dwellers.

5 A.—GREEK HISTORY.

- (1) Geography of Greece.
 - a Location, size, structure.
 - b Absence of political unity.
 - c Various tribes.
- (2) The Spartans and the Athenians.
- (3) Wars with Persia.
 - a The Battle of Marathon.
 - b Miltiades, Aristides, Themistocles.
 - c Xerxes crossing the Hellespont.
 - d The Pass of Thermopylae.
 - e Temple of Delphi.
 - f Battles of Salamis and Plataea.
- (4) The Age of Pericles.
 - a The Parthenon.
 - b The Acropolis.
 - c Growth of Art.
- (5) The Peloponessian War.
- (6) Socrates the Teacher—Plato.
- (7) Damon and Pythias.
- (8) The Sword of Damocles.
- (9) Philip of Macedon.
- (10) Demosthenes, the Orator.
- (11) Alexander the Great.
- (12) The Colossus of Rhodes.

Read: The Story of the Greeks—Guerber.

Reference: Ten Boys.
Church's Story of the Iliad.
Church's Story of the Odyssey.
Johannot's Story of the Olden Time.
Kingsley's Greek Heroes.
Hawthorne's Wonder Book.

SIXTH GRADE.**6 B.—ROMAN HISTORY.**

- (1) The Founding of Rome.
- (2) Location, size and structure of Italy.
- (3) Unity of the People.
- (4) Roman Republic.
 - a Civilization.
 - b Laws.
 - c Internal Improvements (roads, bridges, etc.)
 - d Religion and Architecture.
 - e The Forum.
- (5) Hannibal Crossing the Alps.
 - a Defeat of the Romans.
 - b Cathage Destroyed.
- (6) Conquest of Greece and Syria.
- (7) Mistress of the Mediterranean Sea.
- (8) Life of Caesar.
 - a Conquests in Gaul and Britain.
 - b Crossing the Rubicon.
 - c Conspiracy of Cataline.
 - d Brutus.

- e Pompey.
- f Death of Caesar.
- g Anthony and Cleopatra.

(9) Roman Empire.

The Augustan Age.

- (10) The Birth of Christ and His Teaching.
- (11) The Chariot Race.
- (12) The Pantheon.
- (13) Reign of Nero.
- (14) Persecution of Christians.
- (15) Paul and Peter.
- (16) The Coliseum.
- (17) Constantine I.
- (18) The Arch of Constantine.
- (19) Barbaric Invasions.
- (20) Empire Divided.

Read: The Story of the Romans—Guerber.

Reference: Ten Boys.

Fiske's Beginnings of New England.

Plutach's Lives.

Allen's Rome.

Myers' General History.

6 A.—ENGLISH HISTORY.

I. Early History.

- 1. Conquests by Celts. Country called Bruittan, bruit meaning "tin" and tan meaning "land."
- 2. Civilization of the early Britons. Compare with the American Indians.
- 3. Religious belief of early Britons. Druids.
- 4. Conquest by the Romans. Julius Caesar in Britain.
 - (a) Condition of institutions at this time.
 - (b) Bravery of Britons. Ex.—Caractacus and Boadicea.
 - (c) Effect of Roman Conquest. What effects were lasting?
 - (d) The "Groan of the Britons."

II. Saxon Period.

- 1. Describe the Saxons. Their influence upon all lands where they live.
- 2. Change of the name of the country.
- 3. Stories of King Arthur. Tennyson's Idylls of the King.
- 4. Britons driven into Wales. Story of Vortigern and Rowena, showing how Saxons gradually increased their power.
- 5. Alfred the Great and his work.
- 6. The Danes in England.
- 7. Compare institutions under Alfred with those of the Roman period.
- 8. Edward the Good. His work.
- 9. Saxon influence on the English language.

III. Norman Period. William The Conqueror.

- 1. Conquest. Battle of Hastings. Curfew Law. Game Law. "New Forest."
- 2. Norman architecture. Norman castles.

3. Effect of Normans on institutional life. Compare.
4. Effect of Normans on language. Examples.

IV. Period of Plantagenets.

1. Time of great changes, especially in state and church.
2. Henry II. First King to give up some power to the people.
Origin of trial by jury. Troubles between church and state.
3. Richard I. Gave people more power. Gave cities charters. Richard in the Crusades.
4. The Crusades:
Cause.
Number.
Accomplishments.
Effects upon Europe—
 - (a) Political.
 - (b) Ecclesiastical.
 - (c) Commercial.
5. The Age of Chivalry: Page, Squire, Knight. The Vows of Knighthood. Influence of chivalry.
6. John and his troubles.
 - (a) Loses Normandy.
 - (b) Granted Magna Charta. Why?
7. Beginning of House of Commons under Henry III, 1265. Henry III rebuilds Westminster Abbey.
8. Edward I—Organization of a Representative Parliament, and the confirmation of the right of Parliament to control revenue. Subjugation of Wales. Troubles in Scotland.
9. Edward III.
 - (a) Time of industrial advance in England. Woolen manufacture begun.
 - (b) Beginning of Hundred Years' War. Common people first went into this war. Kings needed money and gave greater rights in order to secure it.
10. Richard II.
 - (a) Social revolution led to emancipation of serfs.
 - (b) Wycliff's translation of the Bible.
 - (c) Chaucer wrote the first great English poem.
11. Compare institutions of this period with those of former times.
12. Wars of the Roses and the self-destruction of the nobles. Great increase of the king's power. Why?

V. The Renaissance Period.

1. The renaissance of learning in Europe. Invention of printing.
2. The fall of Constantinople.
3. Obstructions to establish routes of commerce by the Turks.
4. Venice. Genoa.
5. Commercial conditions in Europe leading up to the Discovery of America. Geographical knowledge.
6. Columbus. Vasco da Gama. The Cabots.
7. England's connection with discoveries and explorations in the new world.

VI. Tudor Period.

1. Absolutism, 1485-1605.
2. Parallel events in American History.
3. Henry VII. New epoch in government, law, letters, intelligence, art, religion. Use of cannon in war.
4. Henry VIII.
 - (a) Story of Church separation.
 - (b) Story of Henry's great power.
 - (c) Story of Henry's family relations.
5. Edward VI. Change in religion. Establishment of Protestantism. Schools founded.
6. Mary I. Short reign. Religious persecution.
7. Elizabeth. Story of her long reign. Stories of her social life. (Kenilworth.)
 - (a) Compare institutions with those of former times.
 - (b) Story of the Armada.
 - (c) Story of Drake and Raleigh.
 - (d) Story of Elizabeth and Mary.

VII. Stuart Period.

Beginning with Divine Right of Kings and ending with Divine Right of People.

1. James I.
 - (a) Growth of House of Commons.
 - (b) Growth of Puritan party.
 - (c) First two permanent colonies in America.
2. Charles I. Petition of Rights. Civil War. Death.
3. The Commonwealth and Cromwell. The emigration of royalists.
4. Charles II.
 - (a) England gains New York. Trouble with Holland.
 - (b) Sir Christopher Wren's work.
 - (c) Persecution of Protestants.
5. James II. Puritan Revolution.
6. James deposed and William and Mary of Orange called.
 - (a) Declaration of Rights.
 - (b) Bill of Rights.
 - (c) War in America with French.

Notice the state of society during the reigns of the Stuarts. Contrast the Nobility and Puritans. Compare institutions of this time with those of the Elizabethan Age.

VIII. The House of Hanover.

1. George I.
2. India Gained.
3. Final struggle with France over possessions in North America.
4. Parliamentary reform. Government by the people in England and in the colonies.
5. George III.
 - (a) Character.
 - (b) Troubles leading to the American Revolution.
 - (c) America lost.
 - (e) War with France.
 - (e) War of 1812.
 - (f) The Regency.

6. George IV.
 - (a) Character. Marriages.
 - (b) Reforms.
 - (c) Catholic Emancipation.
7. William IV.
 - (a) Reform of Parliament.
 - (b) Slavery abolished.
8. Victoria.
 - (a) Character and Marriage.
 - (b) Poor Laws.
 - (c) Opium War.
 - (d) Irish Troubles.
 - (e) War in the Crimea.
 - (f) Sepoy Rebellion.
 - (g) Attitude during Civil War in America.
 - (h) Suez Canal.
 - (i) Gladstone.
 - (j) War in the Soudan.
 - (k) Jubilee.
9. Edward VII.
 - (a) Character.
 - (b) War in South Africa.
 - (c) Relations with United States.

Read: The Story of the English—Guerber.

Reference: Scott's *Ivanhoe*.

Scott's *Kenilworth*.

Scott's *Tales of a Grandfather*.

Tennyson's *Idylls of the King*.

Farrington's *Tales of King Arthur*.

Henty's *Wolf the Saxon*.

Dicken's *Child's History of England*.

Gardner's *Student's History of England*.

Green's *History of the English People*.

Montgomery's *Leading Facts of English History*.

Larned's *History of England*.

SEVENTH GRADE.

7 B.—I. DISCOVERY AND EXPLORATION.

- (1) The Northmen.
- (2) Europe's Need of a New Route to India.
- (3) Columbus.
- (4) John and Sebastian Cabot.
- (5) Vespucci.
- (6) Ponce de Leon.
- (7) Balboa.
- (8) Magellan.
- (9) Cortes.
- (10) DeSota.
- (11) Cartier.
- (12) Champlain.
- (13) Drake.
- (14) Hudson.
- (15) Foundation of Claims to Territory.
- (16) Early Attempts at Settlement in America.

Fiske—*Discovery of America*.

Irving—*Columbus*.

Hale—Stories of Discovery.
 Parkman—Pioneers of France.
 Henty—Under Drake's Flag.

II. LIFE IN THE COLONIES.

(1) Massachusetts:

1. Plymouth Rock and the Pilgrims—Standish.
 Salem and the Puritans—Endicott.
 Hemans—Landing of the Pilgrims.
 Holmes—Pilgrim's Vision.
 Gov. Bradford—History of Plymouth Plantation.
2. The Puritan Exodus.
 Fiske—Beginnings of New England.
 Fiske—Irving's Washington and His Country.
3. The Persecution of the Quakers.
 Whittier—The Quaker of the Olden Time.
 Drake—Making of New England.
 Fiske—Beginnings of New England.
 Hawthorne—The Gentle Boy. (Twice Told Tales.)
4. The Salem Witchcraft.
 Whitties—The Witch's Daughter.
5. The Pequot War.
 Drake—Making of New England.
 Fiske—Beginnings of New England.
6. Discovery of White Mountains.
 Drake—Making of New England.
 Hawthorne—Tales of the White Hills.
 Fiske—Irving's Washington and His Country.
 Beginnings of New England.
 Hawthorne—True Stories of New England History,
 Parts I and II.
 Drake—Making of New England.
 Making of Virginia.

(2) Virginia Colony—a thorough study. Compare and contrast Massachusetts and Virginia colonies in religion, government, education, industries and system of labor. A careful study of them as types and as furnishing conditions for the widely different and differing civilizations which developed in the North and in the South. Sketch maps.

Montgomery—English History: for account of James I, and for political and religious conditions in England.

Channing—Student's History.

Fiske—Beginnings of New England.

Civil Government.

Irving's Washington.

Drake—Making of New England.

Making of Virginia.

Hawthorne—Biographical Sketches.

John Smith—Settlement of Virginia.

Cooper—Leather Stocking Tales.

(3) Study the following colonies more briefly, especially the domestic life, political and religious customs, industries, etc.

Pennsylvania,

New York,

Rhode Island,

Connecticut,

Maryland,

Georgia.

Fiske—Irving's Washington and His Country.

Beginnings of New England.

- Hawthorne—Mrs. Hutchinson, Sir Wm. Phips, Sir Wm. Pepperell, Stories and Sketches.
 Drake—Making of New England.
 Making of Virginia.
 Franklin—Autobiography.
 Whittier—A Quaker of the Olden Time.
 Irving—Rip Van Winkle, and Legend of Sleepy Hollow.
- (4) King Philip and His War.
 Fiske—Irving's Washington.
 Beginnings of New England.
- (5) The Tyranny of Andros.
 Fiske—Beginnings of New England.
 Irving's Washington.
 War for Independence.
 Drake—Making of Virginia.
 Hawthorne—The Gray Champion. (Twice Told Tales.)
- (6) The New England Confederacy.
 Fiske—Beginnings of New England.
 Drake—Making of New England.
- (7) The Indian—Character, customs, habits, modes of expression, religious notions, etc.

7 A.—I. THE STRUGGLE FOR COLONIAL EMPIRE.

- (1) Comparison of French and English settlers.
 a In religious toleration.
 b In missionary spirit.
 c In treatment of Indians.
 d In dependence on the Mother Country.
 e In rapidity and greatness of development.
 f In geographical position.
- (2) The French and Indian War.
 a The three lines of attack, following natural channels of communication.
 1. St. Lawrence river, guarded by Louisburg and Quebec.
 2. Lakes George and Champlain, guarded by Forts Crown Point and Ticonderoga.
 3. Niagara river, controlling the lakes and upper Mississippi.—Read Hawthorne—Old News I and II, and Old Ticonderoga. (Snow Image, etc.)
 b Braddock's defeat.
 c The Acadian expedition and Longfellow's Evangeline.
 d William Pitt.
 e Montcalm and Wolfe.
 f What the War Settled.
- (3) The Conspiracy of Pontiac.
 Kirk Monroe—At War with Pontiac.
 Fiske—Beginnings of New England.
 Irving's Washington.
 Drake—Making of the Ohio Valley States.

II. THE REVOLUTION AND ITS LEADERS.

- (1) Benjamin Franklin.
 Franklin's Autobiography.
 Hawthorne—Biographical Stories.
 True Stories of New England History, Part III.

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- Bolton—Famous Statesmen.
 Stoddard—Inventors. (Men of Achievement Series.)
 Holmes—Franklin, the Landlady's Son.
 (Professor at the Breakfast Table.)
 Wright—Children's Stories of Great Scientists.
 War for Independence—Fiske.
 American Revolution—Fiske.
 Critical Period.
 Beginnings of New England—Fiske.
 Making of the Ohio Valley States—Drake.
 Morse's Franklin. (American Statesmen Series.)
 Hosmer's Samuel Adams. (American Statesmen Series.)
- (2) George Washington. (Virginia Colony.)
 Scudder—Washington.
 Lowell—Under the Old Elm.
 Washington—Rules of Conduct.
 Holmes—Under the Washington Elm.
 Ode for Washington's Birthday.
 Fiske—Irving's Washington and his Country.
 War for Independence.
 Critical Period.
 American Revolution.
 Beginnings of New England.
 Drake—Making of the Ohio Valley States
 Hosmer—Samuel Adams.
 Lodge—Washington.
 Bolton—Famous Statesmen.
 Butterworth—Boys of Greenway Court.
- (3) Samuel Adams. (Massachusetts Colony.)
 Hosmer—Samuel Adams.
 Fiske—Beginnings of New England.
 Critical Period.
 War for Independence.
 Washington and His Country.
 Thomas—A Ballad of the Boston Tea Party.
 (R. L. S. No. 6.)
 Butterworth—The Patriot Schoolmaster.
- (4) Contemporary English History.
 a William Pitt.
 b Edmund Burke.
 c Lord North.
 Burke's Speech on American Taxation.
 Fiske—War for Independence.
 Critical Period.
 American Revolution.
 Hosmer—Samuel Adams.
- (5) The Declaration of Independence.
 Read and Discuss it. (Old South Leaflets.)
- (6) Lexington, Concord and Bunker Hill.
 Longfellow—Lexington.
 Paul Revere's Ride.
 Lowell—Ode. (Concord.)
 Cooper—Lionel Lincoln. (Description of Bunker Hill Battle.)
 Holmes—Grandmother's Story.
 Lexington. (Poem.)
 Hawthorne—True Stories from New England History,
 Part III.

- Coffin—Boys of '76.
 Fiske—War for Independence.
 American Revolution.
 Irving's Washington.
 Critical Period.
- (7) Liberty Bell and Liberty Tree.
 Hosmer—Samuel Adams.
 Hawthorne—True Stories from New England History.
 A Bell's Biography. (Snow Image, etc.)
 Old News, Part III.
 Holmes—King's Chapel. (Poems, III.)
 Fiske—Washington and His Country.
 War for Independence.
 American Revolution.
- (8) The Flag:
 a Of the Colonies.
 b Of the United States.
 c Of the Confederate States.
- (9) Lord Howe.
 Hawthorne—Legend of Province House.
 (Twice Told Tales.)
 Main Street. (Snow Image, etc.)
 Holmes—Boston Common. (Poems.)
 Fiske—Irving's Washington.
 War for Independence.
- (10) Burgoyne.
 Drake—Burgoyne's Invasion.
 Fiske—American Revolution.
 War for Independence.
 Critical Period.
 Irving's Washington.
- (11) La Fayette.
- (12) Cornwallis.
- (13) Outline of Military Plans and Movements.
 (Sketch maps freely.)
 a Preliminary Campaigns.
 b The First Great Defensive Campaign.
 c The Northern Invasion.
 d The First Great Triumph—Saratoga.
 e Americans Assume the Offensive.
 f The Disasters of 1780.
 g The Second Great Triumph—Yorktown.
- (14) Nathaniel Greene.
- (15) The Money Difficulties of the War.
- (16) Francis Marion.
 Bryant—Song of Marion's Men.
- (17) Paul Jones.
 Fiske—War for Independence.
 Seawall—Paul Jones.
- (18) Benedict Arnold.
- (19) Summary of Results of the War.
 Cooper—The Spy.
 The Pilot.

III. THE CRITICAL PERIOD.—Seven Years—1782-1789.

- (1) The Continental Congress.
 (2) Articles of Confederation.
 (3) Trade and Money Troubles.
 (4) The Federal Convention.
 The Building of the Ship—Longfellow.

- (5) The Constitution.
 - Fiske—Critical Period.
 - War for Independence.
 - Washington and His Country.

EIGHTH GRADE.

8 B.—I. THE PERIOD OF WEAKNESS.—1789-1815.

- (1) Five Great Men.
 - a Washington, the Leader.
 - b Madison, the Statesman.
 - c Hamilton, the Financier.
 - d Jefferson, the Expounder of Democratic Principles.
 - e Marshall, the Jurist.
- (2) A Survey of Washington's Administration.
- (3) Growth of Political Parties.
- (4) The X. Y. Z. Dispatches.
- (5) The Alien and Sedition Laws.
- (7) The Louisiana Purchase and the Development of Acquired Territory.
 - Drake—Making of the Great West.
 - Wright—Children's Stories of American Progress.
- (8) Second War with Great Britain. (Sketch maps freely.)
 - Holmes—The Wasp and the Hornet.
 - Old Ironsides.
 - Little Jarvis—Seawell.
- (9) The War with Tripoli.
 - Decatur and Somers—Seawell.
- (10) Contemporaneous English History.

II. WESTWARD EXPANSION.—1815-1850.

- (1) Territorial Growth.
 - a The Northwest Territory, 1787.
 - b The Louisiana Purchase, 1803.
 - c The Florida Cession, 1819.
 - d Texas Annexation, 1845.
 - e The Oregon Country, 1846.
 - f The Mexican Cession, 1848.
 - g The Gadsden Purchase, 1853.
 - h Purchase of Alaska, 1867.

Sketch maps showing area of United States at different times.
- (2) Industrial Progress—Invention.

Biographies:	Fulton, Stephenson, Whitney, Howe, Morse, Cyrus W. Field.	McCormick, Goodyear, Ericsson, Edison, Bell,
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Stoddard—Inventors. (Men of Achievement Series.)
 Bolton—Famous Men of Science.
 Wright—Stories of American Progress.
- (3) The Erie Canal.
- (4) Early Use of Anthracite Coal.
 - Greene—Coal and Coal Mines.

III. SLAVERY AND SECESSION.

- (1) Three Great Men.
 - a John Quincy Adams.
 - b Daniel Webster.
 - c Abraham Lincoln.
 - Hay—Biography of Lincoln.
 - Lincoln—Gettysburg Speech.
 - Morse—John Quincy Adams. (American Statesmen Series.)
 - Lowell—Essay on Lincoln.
 - Lodge—Daniel Webster. (American Statesmen Series.)
 - Bolton—Poor Boys Who Became Famous.
 - Morse—Abraham Lincoln. (American Statesmen Series.)
 - Stoddard—Statesmen. (Men of Achievement Series.)
 - Bolton—Famous Statesmen.
 - Holmes—For Services in Memory of Abraham Lincoln.
 - Birthday of Webster.
 - Emerson—The Fortune of the Republic.
 - Webster—Bunker Hill Oration, and Orations on Adams and Jefferson.
 - Reply to Hayne.
- (2) Jackson and the Spoils System.
- (3) Calhoun and Nullification.
- (4) Henry Clay, the Peacemaker.
- (5) The U. S. Bank and the Panic of 1837.
- (6) A Trio of Abolitionists.
 - a William Lloyd Garrison.
 - b Wendell Phillips.
 - c Theodore Parker.
 - Lowell—The Present Crisis.
 - Garrison and Wendell Phillips.
 - The Bigelow Papers.
- (7) Eminent Writers.

Longfellow,	Hawthorne,
Irving,	Whittier,
Holmes,	Emerson.

 Wright—Children's Stories of American Literature.
- (8) Harriet Beecher Stowe and Uncle Tom's Cabin.
 - Wright—Children's Stories of American Literature.
 - Bolton—Girls Who Became Famous.
 - Holmes—Poems of Harriet Beecher Stowe.
- (9) Trace the History of Slavery from its early introduction into the Virginia Colony to the Civil War, noting the compromises in the Constitution, the various compromise measures, of which the Missouri Compromise, the Omnibus Bill, and the Kansas-Nebraska Bill are notable examples, and its influence on the admission of new states and the acquisition of new territory.
 - Blaine—Twenty Years in Congress.
 - Coffin—Drumbeat of the Nation.
 - Brooks—Boy Settlers. (Kansas Trouble.)
- (10) The Lincoln-Douglas Debate.
- (11) Franklin Pierce.
 - Hawthorne—Biography. (Tales and Sketches.)
 - About War Matters. (Tales and Sketches.)
- (12) Wm. H. Seward.
- (13) Gen. U. S. Grant.

COURSE OF STUDY

- Holmes—At a Dinner to Gen. Grant.
 (14) Charles Sumner.
 Longfellow—The Arsenal at Springfield.
 Charles Sumner. (No. 63 Riverside.)
 Holmes—Hymn at the Funeral of Charles Sumner.
 (15) Seceding States—Sketch a map.
 (16) The Emancipation Proclamation.
 Holmes—Emancipation Proclamation.

S A.—I. THE CIVIL WAR AND RECONSTRUCTION.

- (1) A general Study of the Military and Naval Engagements of the War, and a close study of three or four leading campaigns, e. g.:
 a Early Campaigns: Bull Run, Fort Henry and Fort Donelson.
 Island No. 10, Shiloh, Corinth.
 b Struggles for Washington and Richmond: In the Peninsula.
 Second Bull Run.
 Antietam.
 Fredericksburg.
 Chancellorsville.
 Gettysburg.
 Holmes—My Hunt After the Captain. (Antietam.)
 The Inevitable Trial. (Jly 4, 1863.)
 c The Wilderness Campaign.
 d Between Nashville and Atlanta:
 Murfreesboro.
 Chattanooga.
 Chickamauga.
 Atlanta.
 Capture of Atlanta.
 e Sherman's Campaign—From Atlanta to the Sea.
 Holmes—Sherman's in Savannah.
 f Farragut and New Orleans.
 Holmes—At a Dinner to Admiral Farragut.
 g The Monitor and Merrimac.
 Longfellow—The Cumberland.
 Sketch maps freely.
 (2) The Conscription Act.
 (3) Expense of the War.
 (4) What the War Settled.

II. RECONSTRUCTION AND DEVELOPMENT.

- (1) Provisional Government Established.
 (2) Adoption of the Thirteenth Amendment.
 (3) President Johnson's Plan.) Compare with Lincoln's
 (4) The Congressional Plan.) Views.
 (5) Impeachment of the President.
 (6) The Fourteenth Amendment.
 (7) The Alabama Claims.

III. RECENT EVENTS AND PROMINENT MEN.

- (1) The Atlantic Cable.
 (2) Completion of the Pacific Railroad.
 (3) Weather Bureau.
 (4) Centennial.

- (5) Mississippi Jetties.
- (6) Civil Service Act.
- (7) Brooklyn Bridge.
- (8) Standard Time.
- (9) Bartholdi's Statue of Liberty.
- (10) Venezuela Controversy.
- (11) Tariff Discussion.
- (12) Free Silver Discussion.
- (13) Cuba and Spain.
- (14) Spanish-American War.
- (15) Results of the War.
- (16) Government of the Philippines.
- (17) The "Boxers" in China.
- (18) Assassination of President McKinley.
- (19) Self-government in Cuba.
- (20) The Isthmian Canal.
- (21) The Alaska Boundary Dispute.
- (22) The Louisiana Purchase Exposition.
- (23) Prominent Statesmen.

Blaine,	Reed,
Garfield,	Hill,
Tilden,	McKinley.
- (24) Business Men.

a Cornelius Vanderbilt,	e Phil. D. Armour,
b John Jacob Astor,	f Geo. M. Pullman,
c Levi P. Morton,	g Peter Cooper,
d Chauncey M. Depew,	h Marshal Field,
i Leland Stanford,	j J. P. Morgan.
k J. J. Hill.	
- Stoddard—Business Men. (Men of Achievement Series.)
- (25) Discussion of the influence of Art, Education, Literature, Industries and Commerce as Civilizing Agencies. The growing tendency to Arbitration and the shrinkage of War-Sentiment.

IV. MODERN INDUSTRIAL DEVELOPMENT.

Factory System of Labor.
 Results of Spanish-American War.
 Local Civic Conditions.
 Municipal Government.
 Consolidations and Mergers.
 General Review.

SUGGESTIONS.

Have the pupils reproduce definitely the substance of the oral lessons.

Correlate history and geography, making frequent use of map drawing.

Show relation between causes and results.

Cultivate the habit of independent investigation by encouraging collateral reading.

The teacher must be a thorough student of history to get the best results.

CIVICS.

T.C.—Refer to Marwick and Smith's The True Citizen.

A.C.—Refer to Dole's American Citizen.

Y.C.—Refer to Dole's Young Citizen.

F.L.C.—Refer to Froman's First Lesson in Civics.

SEVENTH GRADE.

7 B.—THE COMMUNITY.

The Schoolroom and the Government. A. C. Chap. 2

What are schools for? Y. C. Chap. 3.

Necessary conditions—Obedience—Self Control.

Government of the schools. F. L. C. 33-37.

(Note the seven cardinal virtues.)

The Playground. A. C. Chap. 3.

Organization necessary.

Public opinion must be respected.

Games, what?

Courtesy. T. C. 119-124.

Honor. T. C. 112-118.

The Principles that Bind Men Together. A. C. Chap. 4.

Respect for others' rights. T. C. Chap. 4

Reverence. T. C. 188-192.

Mutual help and protections.

Strong and weak.

Responsibility.

Chivalry.

The Duties That Men Owe One Another. A. C. Chap. 7.

Social.

Business.

Political.

7 A.—GOVERNMENT.

The Purpose of Government. A. C. Chap. 8.

What Government is. A. C. 40—F. L. C. 13-16.

Two ideas of government. A. C. 41.

Liberty. A. C. 43—T. C. 219-224.

Forms of Government. A. C. Chap. 9. F. L. C. 70-74.

Local Government. A. C. Chap. 10. F. L. C. 74-81.

State Government. A. C. Chap. 11. F. L. C. 103-118.

National Government. A. C. Chap. 12. F. L. C. 138-148.

Cities and Their Government. A. C. Chap. 13.

Beginning of a city. F. L. C. 93-96. Y. C. Chap. 1.

Charter. F. L. C. 96. A. C. 75.

Organization.

Mayor. F. L. C. 100.

Council. F. L. C. 98-99. A. C. 73.

Courts. F. L. C. 101.

Powers of. F. L. C. 101. A. C. 74-75.

- Taxes.** A. C. Chap. 16.
 Public expenses. How paid? A. C. 94. F. L. C. 61.
 Y. C. 3-8, 121-125.
 How levied? F. L. C. 62-64.
 Kinds of taxes. A. C. 95-100. F. L. C. 66-69.
 How used? Y. C. 126-131.

EIGHTH GRADE.

8 B.—CITIZENSHIP.

- Who Are Citizens.** F. L. C. 38-40. Y. C. 25-33.
 Aliens.
 Naturalization.
- Rights of Citizens.**
 Civil. F. L. C. 41-44.
 Political. F. L. C. 45.
- Voting.** A. C. Chap. 9.
 Methods. A. C. 116-119. F. L. C. 50-54.
 Who may vote? A. C. 119-121. F. L. C. 45-48.
- Political Parties.** A. C. Chap. 20. F. L. C. 79-184.
- Conditions of Good Citizenship.** A. C. Chap 5. T. C. 230-234.
 Obedience. T. C. 21.
 Order. T. C. 182.
 Candor. T. C. 28. Honesty. T. C. 112.
 Reverence. T. C. 188.
 Industry. T. C. 67.
 Self-control. T. C. 91.
 Self-respect. T. C. 131.
 Self-help. T. C. 137.
 Faithfulness. T. C. 171.
 Duty. T. C. 200.
 Courage. T. C. 130.
 Temperance. T. C. 206.
 Patriotism. T. C. 213.
 Independence. T. C. 219.
 The Ideal Man. 225.
- Relations of**
 To the Home. T. C. 235.
 To the Community. T. C. 239.
 To the Nation. T. C. 245.
- The Ideal Citizen.** T. C. 250.

8 A.—UNITED STATES GOVERNMENT.

- Details.
 Practical working.
- Governments of**
 Great Britain.
 Canada.
 France.
 Germany.
 Austria-Hungary.
 Switzerland.
 Russia.
 Turkey.
 China.
 Compared with that of the United States.
- Text.**—Clark's The Government.

GEOGRAPHY AND NATURE STUDY.

FIRST GRADE.

Nature Study—some systematic work that the teacher can do, but under direction of principal. Daily changes of weather and phenomena of nature that attract the child's attention should be considered. Teachers of this grade should be familiar with the geography scheme of the grades to follow.

SECOND GRADE.

2 B.—I. Soil:

Experiments to show that soil comes from rock.

II. Moisture in soils:

1. Source of.
2. Absorption by.

III. Atmosphere:

1. Use of.
2. Wind, rain, snow.
3. Uses of wind, rain, snow.

IV. Plants considered in their soil connection:

1. Uses of parts of—roots, stem, leaves, and flowers.
2. Life processes of—drinking, breathing, eating and growing.

2 A.—V. Animals:

1. Simple habits and intelligence of domestic and wild animals in food-getting, rearing and protection of the young.
2. Dependence on environment.

VI. People:

The home, climate, food, clothing, games, etc., of Indian child, of Esquimo child, and of Chinese child, and of the Black child, as compared with that of the White child.

THIRD GRADE.

3 B.—I. Soil:

1. Formation on a large scale, with special application to Superior.
2. Transportation of.
3. Effect of mixing sand with Superior soil; with vegetable mold; and of ploughing.

II. Water:

1. In different soils,
How water passes through.
How water is retained.
2. Water level in soil.
3. Study of a river system; of the Lake, the Bay, the Point.
4. Drainage—with special reference to Superior and vicinity.

III. Atmosphere:

1. Air in the soil:

Its use.

Air level controlled by water level.

2. Evaporation and water vapor in the air.

3. Rainfall and temperature of Superior.

3 A.—IV. Plants—plant life in general and in the region about Superior in particular:

1. Differences in shape, branching, leaves, bark, and wood of trees.

2. Soil sought by each tree.

3. Vegetation about Superior and effect of soil and climate thereon.

4. Study of fruits.

V. Animals:

1. Study of animals, domestic and wild, to note adaptation of anatomy to the food-getting and protective principles. Home; shape of body, nose, feet, teeth; position of eyes; color; protective appendages.

2. Animal life around Superior.

3. Our food, clothing, etc., from animals.

VI. People—nationalities, occupations, habits, dress, amusements, etc., of people of Superior.

FOURTH GRADE.

4 B.—I. Section tributary to the Great Lakes with Superior as a center:

1. Geological history of the section.

2. History of the drainage.

II. Study of the Great Lakes and St. Lawrence River.

III. Climate and rain fall of the section.

IV. Plants of the section:

1. Trees.

2. Economic plants.

3. Each plant studied in its soil, climatic and economic relations.

V. Animals of the section:

1. Domestic—uses and commercial importance.

2. Wild—relation to environment.

VI. People:

1. Nationalities—reasons for in different localities.

2. Distribution of population with reasons for scarcity or abundance.

3. Occupations.

VII. Government—beneficent work of government, not the machinery.

Consider how government protects; how it aids manufacturing, agriculture, mining, commerce, education, etc., with particular reference to this section.

4 A.—Study of the Earth as a globe:

1. Representation of earth.

(a) Difference between (1) picture and globe.

(2) picture and map.

(3) globe and map.

(b) Reading of maps and globes—color, shading, lines, symbols, and terms used.

2. Movements of earth.

(1) On axis—day.

(2) About the sun—year.

3. Inclination of earth's axis—seasons.

4. Division of surface into zones.

COURSE OF STUDY

5. Position of land and water masses.
6. Hemispheres—names.
7. Continents and grand divisions.
8. Water divisions.
- I. World View of Continents:
 1. Physical growth of—traced from oldest highlands.
 2. Basins.
 3. Highlands.
 4. Comparison of each continent with every other in position, size, slope, and character of its basins and highlands.

FIFTH GRADE.

5 B.—Review

- I. World View of Continents.
- II. Principal river systems of each continent—also principal lake regions.
- III. World view of climate, as controlled by latitude, altitude, nearness to sea and direction of prevailing winds:
 1. Inclination of earth's axis and revolution of earth around the sun.
 2. Study of seasons.
 3. Permanent air currents.
 4. Permanent ocean currents.
 5. Rainfall.
 6. Division of continents into climatic belts.
- IV. Plants:
 1. The forest regions of the world determined and mapped.
 2. Conditions and distribution of economic plants.
- V. Animals:
 - Conditions and distribution of.

5 A.—VI. People:

- Conditions and distribution of races.
- VII. Growth of Nations, as determined by their physical environment:

Consider United States, England, Germany, France, Norway and Sweden, Spain, Italy Switzerland, Greece, Russia, India, China, Japan, Egypt, in relation to the following:

 1. Physical surroundings.
 2. Manner of living.
 3. Occupations.
 4. Customs.
 5. Government.
 6. Education.
 7. Religions.
 8. Cities.

SIXTH GRADE.

6 B.—North America with special treatment of the United States:

- I. Land:
 1. Growth of the continent.
 2. Lowlands.
 3. Highlands.
 4. Soils—conditions of economic plants.
 5. Mineral products.
- II. Drainage. River systems.
- III. Climate—conditions of economic plants.
- IV. Plant Life:

Classification of areas producing economic plants with physical basis thereof.

V. Animal Life:

Classification of areas with physical basis thereof.

VI. People:

1. Races, with relations to regions occupied.
2. Occupations and industries with physical basis thereof.
3. Facilities for manufacturing the raw material near producing field and facilities for transporting for manufacturing and use.
4. Position and growth of cities in accordance with the above facts.
5. Commerce as growing out of the necessity for transportation of raw and finished products.

6 A.—South America and Europe considered according to the outline for 6 B. North America.

SEVENTH GRADE.

7 B.—Asia, Africa, Australia, etc., considered according to the outline for 6 B. North America.

7 A.—VII. Government:

1. Purpose of.
2. Forms of—development and physical basis thereof.
3. World view of—political divisions of the world.

VIII. Education:

1. Uses of.
2. Function of government in aiding.
3. World view of.

Special Geography of Wisconsin—four weeks. Consider physical features, peoples, industries, cities, government, and education.

EIGHTH GRADE.

8 B.—IX. Commerce:

1. General conditions of.
2. Of United States considered:
 - (a) Conditions of.
 - (b) Raw products.
 - (c) Manufacture.
 - (d) Transportation.
 - (e) Markets.
3. Of principal countries of the world.

8 A.—See Civics.

SUGGESTIONS.

Each teacher should consider the whole course in geography that she may know the scheme worked out and the principles upon which it is based.

Note that the following points are emphasized and spirally considered: I Land, II Water, III Atmosphere, IV Plant Life, V Animal Life, VI People, VII Government and Nationality, VIII Education, IX Commerce.

In the plan of the course, the observational and physical side of the subject is dealt with in the early part of the course and only later are the complex sociological and governmental facts considered. This for psychological reasons.

In method of development and presentation, three principles are observed: 1. Physiographical facts are the basis of human development; 2. If we are to understand present conditions, we must relate

all geographic facts in a causal sequence; 3. Basal units thoroughly treated and used as types give apperceiving bases for an intelligent treatment of the subject.

Use pictures and diagrams to make clear and objective the ideas presented.

The presentation in the lower grades must be chiefly oral by the teacher; but have questions discussed and a systematic presentation and reproduction in full, clear, and definite form by the pupils.

Keep outlines of the topics treated and record regularly in the plan-book.

Study maps and draw free hand maps of the grand divisions, of United States and Wisconsin. In so doing get pupils to realize the facts of surface and the proportion of parts.

Take broad surveys and comparisons at the close of important topics. Make North America, the United States, and Wisconsin standards of comparisons.

Every geographical type should be clearly grasped by the teacher in its central idea and presented from that standpoint.

The important relations to other studies should be noticed. In other studies use frequently the maps of the United States, of North America, of the World.

Strive to develop a strong and clear imagination that projects definite pictures. Geography is a broad subject but make it definite.

REFERENCES—(Copies furnished each school):

Soil: King's The Soil.

Burkett, Stevens & Hill's Agriculture for Beginners, pp. 1-26.

Tarr & McMurry's Geography, First Part, pp. 1-9.

Dodge's Reader in Physical Geography, pp. 198-205.

Hellprin's The Earth and its Story, pp. 13-19.

Shaler's The Story of Our Continent, pp. 36-40, 183-192.

" First Book in Geology, pp. 24-29.

Dana's Revised Text-book of Geology, p. 34.

Kingsley's Town Geology.

" Madame How and Lady Why.

Fairbank's Home Geography.

and many other texts in geology and agriculture.

Geological History:

Dana's Revised Text-book of Geology.

Herrick's The Earth in Past Ages.

Heilprin's The Earth and its Story.

and other texts in geology and physical geography.

Continental Development:

Shaler's Story of Our Continent.

Mills' International Geography.

Ritter's Comparative Geography.

Dodge's Reader in Physical Geography.

Tarr & McMurry's Geography, Third Part, pp. 1-22.

and other texts in geology and physical geography.

Water and Drainage:

Shaler's Story of Our Continent.

Mills' International Geography.

Ritter's Comparative Geography,

and other texts in geology and geography.

Atmosphere—Climate:

Harrington's About the Weather.

Tarr & McMurry's Geography, First Part, pp. 71-80.
 Dodge's Reader in Physical Geography, pp. 171-197.
 Shaler's First Book in Geology, pp. 56-61.
 " The Story of Our Continent,
 and other texts in physical geography.

Plants: Coulter's Plant Relations.

Burkett, Stevens & Hill's Agriculture for Beginners, Chap.
 III, IV, V, VII.
 Dana's Plants and Their Children.
 Stokes' Ten Common Trees.
 Herrick's The Earth in Past Ages, pp. 135-144, 154-166.
 Morley's A Few Familiar Flowers.
 Kirby's Aunt Martha's Corner Cupboard.
 Kingsley's Madam How and Lady Why, Chap. X.
 Adams' Commercial Geography, Chap. VIII.
 Redway's Commercial Geography, Chap. VIII-XV.
 Redway's Physical Geography, pp. 315-324.
 Shaler's The Story of Our Continent, pp. 193-196.
 " First Book in Geology, pp. 40-53, 155-163.
 and other texts in botany, etc.

Animals:

Jordan & Kellogg's Animal Life.
 Burdett, Stevens & Hill's Agriculture for Beginners, Chap.
 VI, VIII, IX, and pp. 234-240.
 Herrick's The Earth in Past Ages.
 Redway's Physical Geography, pp. 303-334.
 " Commercial Geography, Chap. XVI.
 Adams' Commercial Geography, Chap. IX.
 Shaler's The Story of Our Continent, pp. 196-205.
 Lockwood's Animals Memoirs.
 Chapman's Bird Life.
 Thomson's The Study of Animal Life.
 Miller's My Saturday Bird Class.
 Thompson-Seton's Stories
 and texts in zoology.

Industries:

Rocheleau's Great American Industries: Products of the Soil;
 Minerals; Manufactures.
 Burkett, Stevens & Hill's Agriculture.
 Greene's Coal and Coal Mines.
 Kirby's Aunt Martha's Corner Cupboard.
 Adams' Commercial Geography.
 Redway's Commercial Geography.
 Trotter's Commercial Geography.

Commerce:

Adams', Redway's, and Trotter's Commercial Geographies.
 Webster's General History of Commerce.

Effect of Physical Environment of Man:

Religions		Guyot's The Earth and Man.
Customs		Andrew's Seven Little Sisters who Lived
Civilization		on the Round Ball.
Races		Andrew's Seven Little Sisters Prove
		their Sisterhood.

DRAWING.

FIRST GRADE.

Water Color: Free hand brush work. Development of color sense from study of red, orange, yellow, green, blue, violet; colors applied in flat washes in simple design work; the massing of simple objects, fruits and vegetables; free expression in illustrating the story work.

Clay Modeling: Free and frequent use of clay to develop sight and touch, in study of simple objects familiar to child. Emphasis should be placed upon the provision of simple type models as the young child is not disposed to study details and will, otherwise, fall back upon mental images.

Scissors: The study of form and proportion as applied to expression in number work—square, circle, oblong, etc.; free hand cutting of any desired object; illustration of story work. The work shall be free hand.

Paper Folding: Frequent lessons in folding should be given as the lessons develop dexterity of fingers, attention, and unity of expression. Military precision and directness should accompany this manual work.

Pencil: If a pencil is used in first grade it should be as large and soft as possible. Chalk, charcoal, and crayon are more acceptable.

SECOND GRADE.

Water Color: Continue work of previous grade. Free hand brush work for study of flowers, fruits, vegetables; trees and simple landscapes from nature and memory. Massing simple objects in wash; use of brush in flat washes as applied in design.

Clay Modeling: Continued correlated work from previous grade.

Scissors: Form study to be continued from previous grade to include ellipses, ovals, triangles; the illustration of number and language work; patterns for designs for cloths and wall papers. Entire work shall be freehand.

Chalk, Charcoal, Crayon, Pencil: Use first three fully. Use very soft large pencil for massing or pencil painting.

THIRD GRADE.

Water Color: Free expression in nature study for flowers, trees, fruits, vegetables and simple scenes, as correlating with language, geography and history.

Ink Massing: Two or three tone work as applied in water color study and in design.

Pencil: Outline objects; correct use of eraser; use in design work.

Clay Modeling: Correlated geography and nature work.

Scissors: As required in correlation with geography and nature work.

FOURTH GRADE.

Water Color: Nature study and as required in design, geography, history, etc.

Ink Massing: Application of tone work as required.

Pencil: Continued outline work; massing with pencil for simple tones; as required in design.

FIFTH GRADE.

Water Color and Ink Massing: Nature work; correlated work in geography, history, literature; design work.

Pencil: Outline and shading as applied to still life; pose work; landscape illustration; design.

Perspective:

1. Cube and prisms below level of eye.
2. Cube and prisms above level of eye.
3. Objects like these type forms.

SIXTH GRADE.

Water Color and Ink Massing: Nature work; correlated work in geography, history, literature, etc.

Pencil: Groups of still life in simple light and shade; pose work; design; landscape illustration.

Perspective:

1. Lunch box below level of eye.
2. Simple model of house, barn, castle, or gateway.

SEVENTH GRADE.

Water Color and Ink Massing: Simple landscape work from nature and memory; nature work; groups of still life in sepia or ink; correlated expression of other branches of school course.

Pencil: Groups of still life in light and shade; pose work; simple composition work.

Perspective:

1. Closed large book below level of eye.
2. Open large book below level of eye.
3. Corner of school room.

EIGHTH GRADE.

Water Color and Ink Massing: Simple landscape work from nature and memory; sepia studies; designs; correlated expression of other branches of school course.

Pencil: Groups of still life in light and shade; composition work; design.

Perspective:

1. Steps.
2. Cottage.

MUSIC.

FIRST GRADE.

1 B—Rote songs. Rhymes, voice exercises, ear training, tone relationship, invention, corrective work.

1 A—Continue work of 1 B. Introduce staff with simple exercises from blackboard. Introductory Chart—all exercises without slips in the melody.

SECOND GRADE.

Review: Rote songs. Tone relationship.

Rhythms: Ear and eye training in tune and time. Invention, corrective work.

2 B—First half of Introductory Chart—Educational.

2 A—Finish the Introductory Chart—Educational.

THIRD GRADE.

Review: Rote songs. Ear and eye training in tune and time. Tone relationship.

The problems of this grade are the equally divided beat and sharp four in the nine common keys.

3 B—First half of First Reader—Educational.

3 A—Finish First Reader—Educational.

FOURTH GRADE.

Few rote songs. Tests in tune and time. Tone relationship. Invention. Sharp four and flat seven are treated in their diatonic and chromatic nature.

4 B—First half of Second—Educational.

4 A—Finish Second Reader—Educational.

FIFTH GRADE.

Ear and eye training. Invention. Tests. The relative and tonic minors are studied without theoretical analysis. Composers.

5 B—Page 1 to 31 of Third Reader—Educational.

5 A—Page 31 to 61 of Third Reader—Educational.

SIXTH GRADE.

Study of minor mode. Complete treatment of major and minor keys. Composers. Three part singing. Written work.

6 B—See Fifth Grade suggestions. Finish Third Reader—Educational.

6 A—Page 1 to 30 Fourth Reader, with supplementary songs.

SEVENTH GRADE.

See suggestions for Sixth Grade.

7 B—Pages 31 to 62 of Fourth Reader—Educational.

7 A—From page 62 finish Fourth Reader—Educational.

EIGHTH GRADE.

Written work. Complete review of essentials. Ear and eye tests. Composers. Invention. Bass staff.

A special outline is given for the Fifth Reader.

PHYSICAL TRAINING.

Breathing exercises should be given at beginning of each lesson. Wherever possible the exercises should be varied by marching or exercising in the halls or on the playgrounds, as change of surroundings will be beneficial.

Marching—observe laws.

1. Head erect.
2. Chest leading.
3. Abdomen drawn in.
4. Walk in straight line.
5. All of foot down.
6. Weight on ball of foot.
7. Arms hanging at side.

SERIES I—FIRST AND SECOND GRADES.

Division I.

1. Arms forward or sideways—Raise.
2. Same followed by arms upward—Raise.
3. Arms forward upward or sideways upward—Raise.
4. Arms upward—Bend; downward, upward, forward or sideways—Stretch.
5. Arms upward or forward or sideways—Stretch.
With alternations and combinations on count.

Division II.

1. Feet—Close.
2. Toes—Raise.
3. Heels—Raise.
4. Knees—Bend.
5. Right or left knee upward—Bend.
6. Right or left foot backward—Raise.

Variation can be secured by using the following foot positions: (a) Attention; (b) Right or left foot sideways—Place; (c) Right or left foot sideways, forward—Place; (d) Right or left foot forward—Place; (e) Feet—Close; (f) Feet close and one foot forward—Place.

Progression can be secured by increasing the number of times each exercise is executed. Begin at 10 each and increase to 25 of all but 4th.

Division III.

1. Trunk forward, backward, to right, to left—Bend, or twist, with feet in any of the positions enumerated in Div. II. and
(a) Hands on hips—Place. (b) Arms upward—Bend.

SERIES 2—THIRD AND FOURTH GRADES.

Division I.

1. Arms to thrust—Raise; Downward, forward, sideways or upward—Thrust.

2. Arms forward, sideways or upward—Thrust.
3. Arms forward—Raise (or stretch); Sideways—Swing.
4. Arms forward—Bend; Sideways—Swing.
5. Arms upward—Bend; Elbows forward and sideways—Swing.
6. Arms—Circle (or twist) after arms sideways—Stretch.
7. Exercises of Division I., Series 1, and various foot positions or exercises of Division II., Series 1, with alternations and combinations.

Division II.

1. Same exercises as Division II., Series 1, beginning with 25 of all but 4th, and increasing to 50 of all but 4th exercise. Begin 4th with 10 repetitions and increase to 25.
2. Arms sideways—Stretch; followed by Heels—Raise; Knees—Bend, etc., in any of the foot positions.
3. Arms upward—Stretch; followed by Heels—Raise; Knees—Bend, etc., in any of the foot positions.
4. Marching on toes, on heels.
5. Knee upward—Bend; Leg forward—Stretch.

Division III.

1. Combine twist and bend in exercises of Division III., Series 1. For example, Trunk to right—Twist; Trunk backward—Bend.
2. Trunk forward, backward, to right, to left—Bend, or twist, with feet in any of the positions enumerated in Division II., Series 1, and
 - (a) Neck—Firm.
 - (b) One arm upward—Stretch.

SERIES 3.—UPPER GRADES.

Division I.

1. Right or left arm upward, forward or sideways—Stretch; Arms—Change.
2. Arms upward—Bend; Right upward, left sideways—Stretch. Similarly right upward, left forward and right sideways, left forward—Stretch, and vice versa.
3. Right arm upward, left sideways—Stretch, 1-2. Combinations same as in 2. Also Arms—Change.
4. Series similar to above using "thrust" instead of "stretch."

Division II.

1. Right or left foot sideways, forward, or sideways forward—Lunge. Also with feet—change when possible.
2. Same, then heel—Raise.
3. Same followed by arms upward or sideways—Stretch.
4. Hands on desks—Place; Feet backward—Place; Arms—Bend and stretch.
5. Same, hands on seats.
6. Grasp back of seats. Feet forward—place and hang: Arms bend and stretch.

Division III.

1. Arms upward—Stretch: Trunk forward, sideways or backward—Bend or twist.
2. Trunk forward, sideways or backward—Bend, and Arms upward—Stretch.
3. Arms upward—Stretch; Trunk—Twist; then trunk forward, sideways or backward—Bend.
4. Trunk—Twist; Trunk forward, sideways or backward—Bend; Arms upward—Stretch.

The above to be varied by using the foot positions enumerated in Series 1, Division II.

NECK EXERCISES.

1. Head forward, sideways or backward—Bend.
2. Head to right or left—Twist.
3. Head forward—Bend ;to right or left—Circle.
4. Trunk forward—Bend; Head forward—Bend; Upward—Raise.

BREATHING.

- I. Inhale with
 1. Arms sideways—Raise; same palms upward.
 2. Arms sideways, upward—Raise.
 3. Arms backward—Raise.
 4. Arms to thrust—Raise.
 5. Hands on chests—Place.
- II. Position of attention, inhale, then arms sideways, upward—Raise, and heels—Raise (stretching).

PHYSIOLOGY.

FIRST GRADE.

External parts of the body: Uses and care thereof.

SECOND GRADE.

Foods: Grains, fruits, meats; need of.

Poisons and their effects.

Teeth: Care of.

Bones: Correct positions.

Water and other drinks: Effects thereof.

THIRD GRADE.

Muscles and exercise.

Blood and heat.

Air: Need of. Lungs.

Protection of the body.

Effect of stimulants and narcotics.

FOURTH GRADE.

Krohn's First Book in Hygiene.

SEVENTH GRADE.

Krohn's Graded Lessons in Hygiene.

SUGGESTIONS.

One lesson a week in Physiology and Hygiene in First, Second, Third and Fourth Grades is the minimum requirement.

Two lessons a week in Seventh Grade.

In the other grades have occasional talks on the cleanliness and care of the body and effects of stimulants and narcotics.

In considering the effects of stimulants and narcotics be earnest and consistent. Much good or much harm may be done, depending upon the presentation.

Principals should give, or have given by a suitable person, occasional private talks to the boys and to the girls of the upper grades on care of the body and purity.

MANUAL TRAINING.

The Manual Training work consists of various forms of motor and expressive activity. The plan of the course is not to obtain a direct training of the hand, but a development of the mind through the medium of the hand and eye.

FIRST GRADE.

Double paper weaving with 1" and $\frac{1}{2}$ " strips. A type of work used to develop accuracy and carefulness. The 1" and $\frac{1}{2}$ " strips used to obtain simple practical applications of number relations.

September—Flat weaving—Book marks, mats, etc.

October—Weaving and folding—Trays, frames.

November—Hollow forms—Baskets, boxes.

December—Diagonal weaving, Christmas gifts.

Simple form of hand loom weaving. A means of obtaining a connection between work in the school and one of the industries of the people.

January—Rag carpet type.

February—Dish cloths and towels.

March—Silkoline rugs.

April—Raffia mats.

May—Simple wool rugs.

June—The hammock; and articles formed from the rugs and mats.

SECOND GRADE.

Objects made whose measurements are based on small squares obtained by folding paper into halves and quarters.

September—Flat models—Book covers, envelopes.

October—Folded forms—Boxes, toy chairs.

November—Folded and pasted forms.

December—Diagonal folding and Christmas gifts.

Rug weaving, using various materials. The loom is improved to put the child in touch with colonial times and occupations and to develop simple originality.

January—Simple wool rugs.

February—Raffia plaids, mats.

March—Designs based on the square.

April—Designs based on the diagonal.

May—Indian rugs.

June—Irregular articles woven on cardboard looms.

THIRD GRADE.

Work in paper requiring measuring with ruler into inches and half-inches. Designs based on squares.

September—Flat models—Name plate, book mark.

October—Cut and folded models—Envelopes, book covers.

November—Cut, folded and pasted models—Boxes.

December—Models based on geometrical solids. Christmas gifts.

Simple Baskets—Common types of modern baskets.

January—Grass mats.
 February—Grass baskets.
 March—Splint baskets, square weave.
 April—Splint baskets, round weave.
 May—Splint baskets, diagonal weave.
 June—Braided raffia and grass articles.

FOURTH GRADE.

Cardboard work demanding measurements to one-fourth of an inch. Simple design adapted to structure.

September—Flat models—Twine winders, trays.
 October—Cut and folded models—Brackets and trays.
 November—Bound models—Boxes.
 December—Covered models—Portfolios.

Indian Baskets—A point of contact with the life of the Indian.

January—Simple coiled mats.
 February—The Lazy-squaw stitch.
 March—Tule River Indian stitch.
 April—Indian and original designs.
 May—The Navaho weave.
 June—Baskets in Mariposa and Toas weave.

FIFTH GRADE.

The reed and willow baskets. Baskets of present day commerce.

September—Reed mats.
 October—All reed baskets.
 November and December—Reed and raffia baskets.
 January—Willow baskets.
 February—Willow and rush baskets.
 March—Willow splints and raffia.
 April—Indian baskets—The "Vi" weave of the Pomo's.
 May—Pomo Bam-tush weave.
 June—Samoan and Klikitat weaves.

SIXTH GRADE.

Bent Iron Work—Work in thin iron demanding greater muscular co-ordination. Simple design based on structure.

September—Square bends. Photograph holders. Mats.
 October—Bends and twists—Pen trays, plate rack.
 November—Models using binders—Glass holders, envelopes and card racks.
 December—Models using binders—Pen tray, plate rack, pencil holder.
 January—Original models based on curves.
 February—Geometrical forms in thin metals. The use of rivets.
 March—Geometrical forms based on circle.
 April—Simple molding in sheet metal.
 May—Molded and riveted models.
 June—Simple designs based on building construction. The practical application of ideas of strains.

SEVENTH GRADE.

Shop Work.—Boys.

- 7 B.—Bench work in wood. Models of useful articles made from one piece of wood. The use of the carpenter's tools needed for work with square corners. Simple geometrical carving. Mechanical drawing based on the models made.

Models—Ruler, plant stake, necktie holder, tool rack, marble game, key rack.

- 7 A.—Bench work requiring cutting in the round. Mechanical drawing based on wood construction. Wood engraving.

Models—Coat hanger, closet rack, bread board, sleeve board, tea-pot stand.

Sewing.—Girls.

- 7 B.—1. Clothing and Its Uses.
 2. Color.
 3. Preliminary remarks.
 1. Position while sewing.
 2. To thread a needle.
 3. Length of thread.
 4. To make a knot.
 5. How to use a thimble.
 6. Cloth.
 (a) Different kinds; (b) explain the manufacture of cloth.
4. Sewing.
 1. Basting, running, backstitching, half backstitching and overcasting.
 2. Overseaming and matching stripes.
 3. Heming, overseaming, overcasting and sewing on lace—pillow slip.
 4. Child's two breadth gingham apron.
 5. Sewing bag.
5. Topics for discussion:
 1. Thimbles.
 2. Cotton.
- 7 A.—1. Review work of previous grades.
 Special attention given to neatness and accuracy.
2. Sewing.
 1. Darning and French Hemming.
 2. Patching on flannel—Catch stitching, feather stitching and blanket stitch.
 3. Darning on stockinette.
 4. Mitred corners.
 5. Doll's flannel underskirt.
3. Topics for discussion.
 1. Needles and pins.
 2. Linen.

EIGHTH GRADE.

Shop Work.—Boys.

- 8 B.—Bench work with models composed of several pieces of wood. Mechanical drawing based on building construction in wood.

Models—Book holder, bench hook, shelves, towel roller, necktie rack.

- 8 A.—Models requiring simple joints. Projects in wood construction. Mechanical drawing of models showing practical application of strength and strain in wood construction.

Sewing.—Girls.

- 8 B.—1. Review work of previous grades.
2. Sewing:
 1. Button holes, blind loops, eyelets, and sewing on buttons.
 a Special attention to be paid to button holes, as to cutting, basting, overcasting cut edges, button hole stitch and mending the thread.
 2. Overhanded patch on wool:
 a Definition of a patch.
 b Importance of, from an economical and moral side.
 c Special attention to matching the warp and woof threads.
 3. Doll's nightdresses:
 a Practice in making filled seams, hems, plackets and sewing on lace.
 b Definition of a filled seam—hem and placket.
 c Explain a line of the filling stitch.
 4. Hemstitching and overseaming a whipped ruffle.
3. Topics for discussion:
 1. Scissors and shears.
 2. Wool.
- 8 A.—1. Review work of previous grades.
2. Sewing:
 1. Darning on cashmere.
 a Corner, straight and diagonal tears.
 2. Doll's five gored skirts.
 3. Doll's flannel jackets.
 4. Infants' bonnets.
 a Practice in tucking, rolling hems and sewing on lace.
3. Topics for discussion:
 Buttons.
 Silk—its growth and manufacture.



WRITING.

FIRST AND SECOND GRADES.

Visualize and reproduce word-forms on board and paper.

Copy sentences from board and readers.

Much blackboard work.

- 2 A.—Natural System of Vertical Writing, Book 1.

THIRD GRADE.

- 3 B.—Natural System of Vertical Writing, Book 1.

- 3 A.—Natural System of Vertical Writing, Book 2.

FOURTH GRADE.

- 4 B.—Natural System of Vertical Writing, Book 3.

- 4 A.—Natural System of Vertical Writing, Book 4.

FIFTH GRADE.

- 5 B.—Natural System of Vertical Writing, Book 4.

- 5 A.—Natural System of Vertical Writing, Book 5.

SIXTH GRADE.

- 6 B.—Natural System of Vertical Writing, Book 5.

- 6 A.—Natural System of Vertical Writing, Book 6.

SEVENTH GRADE.

- 7 B.—Natural System of Vertical Writing, Book 6.

- 7 A.—Natural System of Vertical Writing, Book 7.

EIGHTH GRADE.

- 8 B.—Natural System of Vertical Writing, Book 7.

- 8 A.—Natural System of Vertical Writing, Book 8.

SUGGESTIONS.

Have much writing on the blackboard in the lower grades.

Cultivate free easy movement and comfortable, correct positions.

Insist that all written work be the very best that can possibly be done. More can be accomplished by this requirement than by any other means. Look for constant improvement day by day, week by week, month by month.

Give attention to letter forms and movement drills. Do not worry about slant, so long as there is uniformity in a pupil's writing.

HIGH SCHOOL.

HIGH SCHOOLS.

Superior is provided with two well-equipped high schools: the Nelson Dewey at the East End and the Blaine at the West End. The Nelson Dewey receives pupils from the Nelson Dewey grades, the Lincoln, the Allouez and Itasca districts; the Blaine from the entire West End, including South Superior and Billings Park.

Our two high schools are on the list of Accredited Schools of the North Central Association of Colleges and Secondary Schools. Our graduates are therefore admitted without examination to the principal colleges and universities of the country.

COURSES OF STUDY.

The several optional courses are intended to meet the individual needs and purposes, while preserving at the same time as a common basis those subjects generally recognized as most essential to a general education and the making of good citizenship.

The Commercial Course has recently been introduced and even with the present equipment, offers a sound preparation for business. The aim of the other courses, while leading to various courses of the university, is to prepare for life.

The requirements for graduation are stated in terms of credits. The term "credit" means the equivalent of five recitations per week of prepared work for one semester in one branch of study. Thirty "credits" are required for graduation, at least seven of which must be taken from each of the four years. 75 per cent is the passing grade.

In the table of the courses, the first column contains the subjects required to be taken by all irrespective of the course he wishes to pursue. The columns headed English Course, Latin Course, &c., contain subjects that are required in addition to those given in the first column and determine the course the pupil is pursuing. Each pupil's minimum requirement of work is twenty hours, or periods, in all courses excepting the Manual Training, where the minimum is twenty-three, and the maximum in all courses twenty-five; therefore, it will be necessary for each pupil to choose such work from the Elective column for his respective year as to make the required number of hours.

COURSE OF STUDY

	ALL COURSES REQUIRED	ENGLISH COURSE REQUIRED	LATIN COURSE REQUIRED	GERMAN COURSE REQUIRED
First Year	English— (a) Gram. .3 } (b) Comp. .3 } 5 Literature .2 } Algebra 5 (a) Elem. Geometry....3	Ancient Hist....5	Latin 5	Same as the English or the Latin Course
Second Year	English— Comp. 2 } Literature .3 } 5 Geometry— Plane and Solid.....5	Medieval and Modern Hist...5	Latin 5	German 5
Third Year	(a) English History.....5 (b) American History.....5	English— Comp. 2 } Literature .3 } 5	Latin 5	German 5
Fourth Year	(a) American History.....5 (b) Civics.....5	(a) Eng. Lit. 5 (Historical) (b) Am. Lit.....5 (Historical)	Latin 5	German 5

The figure after each subject indicates the number of recitations per week. (a), used above, means that this subject is carried only the first half of the year, and is displaced by (b) which is the subject carried the last half of the year.

SCIENCE COURSE REQUIRED	MANUAL TRAIN- ING COURSE REQUIRED	COMMERCIAL COURSE REQUIRED	ELECTIVES
Ancient Hist.....5 (b) Physiology..5	Manual Training.....3 } 5 Mech. Draw. 2 (b) Physiology ..5	Ancient History.....5 (a) Penman- ship.....3	Ancient History.....5 Freehand Drawing..2 (b) Physiology.....5 Manual Training.....3 Mechanical Drawing.....2 (a) or (b) Penman- ship.....3
Physiography.....5	Manual Training.....3 } 5 Mech. Draw. 2 ⑦	(a) Commer- cial Arith.....5 (b) Commer- cial Geog.....5	Physiography.....5 Medieval and Modern History..5 (a) Commercial Arithmetic.....5 (b) Commercial Geography.....5 Freehand Drawing..2 Manual Training.....5
Chemistry.....5	Manual Training.....5 English— Comp. 2 } 5 Literature..3	Book-keeping ..5	(a) Theory of Arithmetic.....5 (b) Higher Algebra..5 Book-keeping.....5 Chemistry.....5 English— Composition.....2 } 5 Literature.....3
Biology.....5	Manual Training.....5	(a) Commer- cial Law.....5 (b) Commer- cial Hist. 5	Trigonometry.....5 (a) Psychology.....5 (b) Pedagogy.....5 Biology.....5 (a) or (b) Economics 5 (b) Reviews.....5

The figure after each subject indicates the number of recitations per week. (a), used above, means that this subject is carried only the first half of the year, and is displaced by (b) which is the subject carried the last half of the year.

UNIVERSITY REQUIREMENTS.

Twenty-eight units are required for admission. Until the academic year 1905-06 equivalents will be accepted for the four units of language required. Students applying for admission in 1905-06 and thereafter who offer twenty-eight units which do not include four units of foreign language, will be admitted on condition that the language requirements be met before graduation. This will ordinarily require extra work to the extent of four hours a week for one year.

No language course of less than four units will be accepted. Not more than eight of the required twenty-eight units will be accepted in any one subject.

The entrance requirements are presented under two general heads:

I. Studies required of all; II, Optional groups.

I. The following units are required of all:

Mathematics	4 units
English	4 units
History	2 units
Science	2 units
	12 units

II. In addition to the requirements under I, sixteen units from one of the four following groups must also be offered:

GROUP A.

Latin 8 units.
Any 8 units from the following:
Greek 4 units.
German 4 units.
French 4 units.
Elective 4 units.
(from groups B., C., D.)

GROUP B.

Latin 8 units.
Any 8 units from the following:
English 2 or 4 units.
History 2, 4 or 6 units.
Civics, Economics 2 units.
Mathematics, 2 units.
Science, 2, 4 or 6 units.
Foreign Languages, 4 units.

GROUP C.

German or French 8 units.
Any 8 units from the following:
English 2 or 4 units.
History 2, 4, or 6 units.
Civics, Economics 2 units.
Mathematics 2 units.
Science, 2, 4, or 6 units.
Foreign Language, 4 units.

GROUP D.

German or French 4 units.
Any 12 units from the following:
English, 2 or 4 units.
History, 2, 4, or 6 units.
Civics, Economics, 2 units.
Mathematics, 2 units.
Science, 2, 4 or 6 units.
Latin, 4 or 6 units.
French or German, 2, 4, or 6 units.

"Unit" is equivalent to one "credit."

ENGLISH.

Grammar.—Required the first semester of the first year in all courses .

Grammar in the high school ought to serve as a means of interpretation and self-criticism; that it may have this function during all the years of high school work, it will doubtless be necessary to require a thorough review of the essential grammatical definitions, principles and rules. This review, however, is a mere preparation for the subject as a high school study, is largely memory work, and should be done without waste of time. With these essentials mastered, it will be necessary during the first year to give much practice in applying them to plain, simple English. The work is directed to this end, namely, that the pupil should be able to define the various terms employed in elementary grammar, to give the rules of syntax, rules for spelling, rules for the use of punctuation marks; in short, it is the simple application of the rules and principles and definitions of the grammar grade. There should be much study of the sentence, occasional work in parsing, sentential analysis, and a bringing together of those conclusions that tend to aid in self-criticism and right interpretation of language. The text-book used is Longman's School Grammar, but it will be necessary for the teacher to rely mostly upon her own resources and provide the material for class-room herself.

Composition and Rhetoric.—Required work for two years, beginning with the first semester of the first year.

The practice and study of composition should give pupils ability to express their own thought with clearness and accuracy. The work of the first year should have for its purpose largely, to give pupils some confidence, to make them free and flexible, to arouse an interest in the art of composition, and to give a knowledge of a few of the simplest and most common rhetorical principles.

The work in composition during the first year should be confined to the essentials of English. By this is meant not a separate branch, but a concentration of effort upon the essentials. Whatever in grammar is necessary for such work in composition as will give accuracy and facility in expression, either written or oral, should be taught if it is not already known. This knowledge should be utilized and applied through drill in the composition work, until its value is shown in improved written and oral forms of expression fixed as habit.

The work should deal in a large measure with the sentence and sentence relation. The text-book used is Maxwell & Smith's Writing in English, or Scott & Denney's Elementary Composition. The work outlined in either book is well adapted to the needs of first year pupils. Regular and persistent training in both written and oral composition should be given throughout the entire course. The composition work in all classes should form two-fifths of the entire work in English and should come at regular intervals, thus avoiding the crowding of this work into an unequal distribution of time. It is desirable that portions of the work of pupils should be kept on file.

In the second year a large part of the time is spent upon a more minute study of the paragraph. A more formal study of rhetoric is also

begun. The text book used is Scott & Denney's *Composition and Rhetoric*.

In the third year the work of the first two years should be elaborated, continued drill being given in the writings of English as embodied in the essay, oration, and debates. Oral exercises in connection with debates, both prepared and impromptu, should be given.

Literature: The study of literature is not the study of the history of literature with the occasional poem or fragment of prose thrown in. To stuff the mind of the biographies of authors, and to memorize the list of books they have written is not to study literature. Instead of reading about authors and studying a text-book on literature, the student must come into direct contact with the literature and read for himself. The practice in teaching literature has been to take a few pieces of literature and to spend much time in analyzing each one. The meaning of every word is studied and its derivation traced, figures are pointed out and named, historical facts verified, accuracy of scientific facts tested, every allusion traced until in this process of vivisection the real life has been lost. Great pieces of literature have lived not because they furnish fine fields for mental gymnastics, but because they reveal the deepest, the truest, the most beautiful, the best in life. Literature is an expression of the soul of humanity, of the whole range of human experiences, and the study of literature should consist in the interpretation of the experiences, the thoughts, the feelings, and the aspirations of the race. Dr. J. W. Stearns says:—"Interpretation should consist in such things as the artistic presentation of character types, the setting forth of the play of circumstances in moulding character, the unfolding of the consequences of actions and the might of destiny, the manifestations of the spiritual meaning of material things revealing the charm of beauty in things common, touching into life the springs of noble emotions in us, filling us with a sense of the deeper meanings of life, and enlarging our sympathies."

It is not sufficient that the pupil be taught to get the thought from the printed page and to express this thought in logical language to others, but his language must be pleasing and effective. This is the purely mechanical phase of reading.

The idea here is not how much ground is covered in a recitation, but how well the little undertaken is accomplished. Two or three lines a day thoroughly mastered in the art of right expression, is far better than a superficial lesson of several paragraphs or pages. Good models are of inestimable value to the pupils, hence it would be well for the teacher to select different types of literature which represent the various phases of expression and read them to the pupils as he believes they should be read. This suggestion calls into play the teacher's own art of reading and consequently means that he should be thoroughly prepared to practice that which he preaches.

In the teaching of vocal expression the pupils should be drilled in examples which illustrate: (1) force, (2) inflection, (3) time, (4) quantity, (5) pauses, (6) volume, (7) stress, (8) quality, (9) pitch, (10) melody. It is not necessary for the pupils to know the technical definitions of these terms.

Daily drill exercises, occupying the first few minutes of each recitation, in pronunciation as indicated by the use of diacritical marks; in distinct articulation; in emphasis; and in spelling by sound will be found very helpful.

Ease on the part of the reader and pleasure on the part of the hearer are ends which should always be kept in view.

History of Literature: A short course in history of literature,—taking the history in great epochs,—these epochs based upon the kind of literature produced,—may be of value in the study of literature. The history should serve as a frame-work to keep the reading organized and to help the student to get some idea of the entirety of literature. In the study of the history of literature some of the most typical pieces of literature might be read in a cursory way.

First Year—First Semester: Readings from McNeil and Lynch's Introduction to Literature.

Second Semester: Eliot's Silas Warner.

Second Year—First Semester: Shakespeare's Julius Caesar.

Goldsmith's Vicar of Wakefield.

Second Semester: Addison's Sir Roger de Coverley Papers.

Tennyson's Princess.

Third Year—First Semester: Milton's L'Allegro, Il Penseroso, Lycides, Comus, and Sonnets.

Carlyle's Essay on Burns.

Second Semester: Shakespeare's Macbeth.

Fourth Year—First Semester: Burke's Speech on Conciliation with America.

Halleck's History of English Literature.

Second Semester: Macaulay's Essays on Milton and Addison.

History of American Literature.



GERMAN.

It should be continually borne in mind by the teacher that German should be taught in the interest of good teaching and not in the interest of the most expeditious preparation for college. Symmetrical training in the secondary school must keep in view more things than are likely to be "required" of the candidate at his examination for admission to college. The colloquial side of this subject has been much neglected in high schools and the aim of teachers should be not only to secure a ready reading of the German texts but also to give the pupils ability to converse in the German language upon ordinary topics by the time they have completed the work of the second year.

The following courses of study and suggestions are condensed from the report of the Committee of Twelve of the Modern Language Association of America, which may be found in the proceedings of the National Educational Association for 1899, page 732.

First Year.—

- a. **THE AIM OF THE INSTRUCTION:**—At the end of the elementary course in German the pupil should be able to read at sight, and to translate, if called upon, by way of proving his ability to read, a passage of very easy dialogue or narrative prose, help being given upon unusual words and constructions; to put into German short English sentences taken from the language of every day life or based upon the text given for translation, and to answer questions upon the rudiments of the grammar, as defined below.
- b. **THE WORK TO BE DONE:**—During the first year the work should comprise: (1) careful drill upon pronunciation; (2) the memorizing and frequent repetition of easy colloquial sentences; (3) drill upon the rudiments of grammar, that is, upon the inflection of the articles, of such nouns as belong to the language of everyday life, of adjectives, pronouns, weak verbs, and the more usual strong verbs; also upon the use of the more common propositions, the simpler uses of the modal auxiliaries and the elementary rules of syntax and word order; (4) abundant easy exercises designed not only to fix in mind the forms and principles of grammar, but also to cultivate readiness in the reproduction of natural forms of expression; (5) the reading of from 75 to 100 pages of graduated texts from a reader, with constant practice in translating into German easy variations upon sentences selected from the reading lesson (the teacher giving the English), and in the reproduction from memory of sentences previously read.

The grammar used is Joyne-Meissner's. The class is expected to complete Parts I and II.

Second Year.—

- a. **THE AIM OF THE INSTRUCTION:**—At the end of the advanced course the pupil should be able to read at sight German prose of

ordinary difficulty, whether recent or classical; to put into German a connected passage of simple English, paraphrased from a given text in German; to answer any grammatical questions relating to usual forms and essential principles of the language, including syntax and word-formation, and to translate and explain (so far as explanation may be necessary) a passage of classical literature taken from some text previously studied.

- b. **THE WORK TO BE DONE:**—During the second year the work should comprise: (1) The reading of from 150 to 200 pages of literature in the form of easy stories and plays; (2) accompanying practice, as before, in the translation into German of easy variations upon the matter read, and also in the off-hand reproduction, sometimes orally and sometimes in writing, of the substance of short and easy, selected passages; (3) continued drill upon the rudiments of the grammar, directed to the ends of enabling the pupil, first, to use his knowledge with facility in the formation of sentences, and, second, to state his knowledge correctly in the technical language of grammar.

The text-books used are Joynes-Meissner's Grammar, Part III, and Bernhardt's German Composition. The work in composition should be regular.

Stories suitable for the elementary work can be selected from the following:

Andersen's *Marchen* and *Bilderbuch ohne Bilder*; Arnold's *Fritz auf Ferien*; Baumbach's *Die Nonna* and *Der Schwiegersohn*; Gerstacker's *Germelshausen*; Heyse's *L'Arrabbiata*, *Das Madchen von Treppi*; Hillern's *Hoberalsdie Kirche*; Leander's *Traumereien* and *Kleine Geschichten*; Seidel's *Marchen*; Storm's *Immensee*; Zschokke's *Der zerbrochene Krug*.

The best shorter plays are:

Benedix's *Der Prozess*, *Der Weiberfeind*, and *Gunstige Vorzeichen*; Ely's *Erist nicht eifer suchtig*; Wichert's *An der Majorsecke*; Wilhelm's *Einer muss Heiraten*; Schiller's *Der Neffe als Onkel*.

A good selection of reading matter for the second year would be Andersen's *Marchen*, or *Bilderbuch*, or Leander's *Traumereien*, to the extent of about forty pages. Afterward, such a story as *Das kalte Herz*, or *Der zerbrochene Krug*; then *Hoher als die Kirche*, or *Immensee*; next a good story by Heyse, Baumbach, or Seidel; lastly *Der Neffe als Onkel*.

Throughout the entire course the memorizing of poetry can be used to good advantage and should receive regular attention.

Third Year.—

The work should comprise the reading of about 400 pages of moderately difficult prose and poetry, with constant practice in giving, sometimes orally and sometimes in writing, paraphrases, abstracts, or reproductions from memory of selected portions of the matter read; also grammatical drill upon the less usual strong verbs, the use of articles, cases, auxiliaries of all kinds, tenses and modes (with especial reference to the infinitive and subjunctive), and likewise upon word order and word formation.

Suitable reading matter for the third year can be selected from such works as the following:

Freytag's *Die Journalisten* and *Bilder aus der deutschen Vergangenheit*, for example *Karl der Grosse*, *Aus den Kreuzzügen*, *Doktor Luther*, *Aus dem Staat Friedrichs des Grossen*; Fouque's *Undine*; Gerstacker's *Irrfahrten*; Goethe's *Hermann und Dorothea* and *Iphigenie*; Heine's poems and *Reisebilder*; Hoffmann's *Historische Erzählungen*; Lessing's *Minna von Barnhelm*; Meyer's *Gustav Adolfs Page*; Moser's *Der Bibliothekar*; Riehl's *Novellen*, for example, *Burg Neideck*, *Der Fluch der Schönheit*, *Der stumme Ratsherr*, *Das Spielmannskind*; Rosegger's *Waldheimat*; Schiller's *Der Geisterseher*, *Wilhelm Tell*, *Die Jungfrau von Orleans*, *Das Lied von der Glocke*, *Balladen*; Scheffel's *Der Trompeter von Säckingen*; Uhland's poems; Wildenbruch's *Das edle Blut*.

A good selection would be: (1) one of Riehl's novelettes; (2) one of Freytag's "pictures"; (3) part of *Undine* or *Der Geisterseher*; (4) a short course of reading in lyrics and ballads; (5) a classical play by Schiller, Lessing, or Goethe.



LATIN.

First Year—The work of this year deals with the inflections and the more simple and most common principles of syntax, as covered by the usual beginner's book. An understanding of word-relationship as revealed by case-forms and mood-forms is developed from the first day, no steps being taken in sentence building without the process of "construction" being understood. This idea of word-relation indicates the particular object of this year's work.

The last six weeks of the spring term are spent with *Viri Romae* or the second book of *Cæsar's Gallic War*. Latin order and emphasis by position are constantly noted.

Second Year—The purpose of the second year's work is the development of clause relation as revealed by mood. A careful study of the relation of subjunctive to indicative clauses and the difference between the various subjunctive clauses is made throughout the year.

The order is especially emphasized. Idiomatic English only is allowed.

Text and Assigned Work.

From four to six books are read of *Caesar's Gallic War*, selections being included from the VIth and VIIth Books, with references to history and customs suggested by the context.

Papers are to be prepared on such topics as, *The Roman Army*; *the Senate*; *the Public Career of a Roman Politician*, etc.

The last term is spent in reading the *Cicero's First Oration against Catiline*.

Composition:

Lessons in composition are given once a week—following *Pearson's Composition*.

Third Year—By the beginning of the third year the student is supposed to have gained considerable power to read continuous discourse, in its own order, and from this time rapid reading is encouraged. To accomplish this result, text is read at sight each day, and an extended passage of review, frequently.

For the first time very especial attention is given to nice distinctions in words, suggested by *Cicero's* extensive use of synonyms and his fine differences in syntax, especially in the use of moods.

First Semester.

Text:

Cicero's Orations against Catiline are finished and *Sallust's Catiline*.

Composition:

Composition is continued in connection with the text-lessons prepared at least once a week.

Second Semester.

Text: The first three books of Vergil's Aeneid are read, with the fourth at sight. Mythology, History and Art, relating to the text, furnish subjects for special study. Figures, both rhetorical and syntactical, are noted.

Fourth Year—The aim and scope of the last year's work is a continuation of that of the third year, with a systematic review of grammar added.

First Semester.

Text: Selections from the fifth book of Vergil, all of Book VI, and parts of Books VIII and XII. Note-book work is continued.

Second Semester.

Text and Assigned Work: Cicero's orations for Archias and for Pompey's military command.

Composition: Composition based on text is prepared once a week.



MATHEMATICS.

(a) Elementary Algebra.

Text Book—Well's Essentials of Algebra. The year's work is practically the same as that outlined in the Manual of the Free High Schools of Wisconsin, 1903.

During the first semester, the fundamental operations are mastered. Special attention then given to factoring prepares the way for the study of highest common factor and least common multiple, which should be treated together, rather than separately. From four to five weeks devoted to fractions, at the end of the semester will give the pupil a review of the work previously studied. The equation, introduced as early as possible in the course, gives the pupil the ability to solve the problems in the ordinary text-books.

During the second semester, simultaneous equations with two unknown quantities, and a few with three unknown quantities, are taken up. A study of exponents and radicals leads the pupil into quadratic, and simultaneous quadratic equations. Throughout the course, a sufficient number of problems is given to render the pupil familiar with the practical applications of algebra. Frequent mental drill in all parts of the work is an important factor in the disciplinary value of the subject.

(b) Higher Algebra—Wells' New Higher Algebra.

The course consists of a review, enforcement and expansion of elementary algebra and its principals, and of advanced work in surds, imaginary and complex numbers, progressions, the binomial theorem, proportion, undetermined coefficients, and logarithms.

(a) Elementary Geometry.

Text-Book—First Steps in Geometry, Wentworth & Hill.

The work of this course is experimental, for the most part. The pupil is made familiar with the language and scope of Geometry and is prepared for the work as outlined in course (b). Definitions of the terms most frequently used are learned, while at the same time, concrete illustrations fix in the child's mind the fact that Geometry, instead of being a difficult subject, based upon abstract and remote ideas, is in reality a subject in which he may discover for himself many interesting and important truths. The recitation room, in its form and equipment, furnishes numerous illustrations of lines and planes, horizontal and vertical lines, intersecting lines and planes, etc. By means of paper-folding, such theorems as the following are developed in the class-room:—

The sum of the angles of a triangle is equal to two right angles.

The perpendicular bisector of the base of an isosceles triangle divides the triangle into two equal triangles.

The perpendicular bisectors of the three sides of a triangle intersect at a common point.

A pair of scissors in the hands of the pupil enables him to supplement the exercises in paper-folding, with important exercises in paper-cutting. Symmetry and symmetrical figures are then easily understood. Problems in construction teach the pupil to draw accurate figures, and the transition into the field of the formal demonstration is made a simple and natural stage in his development.

(b) Geometry—Plane and Solid—Second year.

The work consists of the fundamental propositions of geometry and of selected exercises. Models are made and figures constructed, especially in solid geometry, from which the more difficult propositions are demonstrated.

Wells' and Wentworth's books are used, supplemented by the more desirable features of other texts.

In the beginning, definitions are introduced as the pupils need them after the teacher has made them clear by figure and explanation. The more easy propositions, as those of superposition, are given first instead of the usual proposition of the text-book, "All right angles are equal," or "All straight angles are equal." These propositions are given by the suggestive method. When the pupils are able to logically follow a demonstration, the text-books are put in their hands.

The aim throughout the work is to secure logical, independent thinking, neatness, accuracy, conciseness and precision. Not to have the pupils learn proofs but to have them prove, not to have them memorize but to think is the chief end sought. This is secured by rigorous, close questioning on the part of the teacher; by encouraging and asking for questions and criticisms from the class on each recitation; by encouraging original demonstrations of propositions; by securing proofs without the use of the text; by the use of figures different from those in the book, etc.

The work should be presented so as to call forth the best effort of the pupil and yet he should never be allowed to become discouraged because of lack of suggestions from the teacher.

The pupil should be led to see that geometry is a structure built up step by step and that each succeeding step depends on the preceding one—that geometry is a unit—a whole—and that its logic is the logic of every day thinking.

Higher Arithmetic.

This work embraces the theoretical part of arithmetic and leads to close analysis on the part of the pupil.

The text-book, Beman and Smith, is closely followed.

Trigonometry—Wells' Plane Trigonometry.

The pupils study the solution of the triangle and its application to surveying. Practical problems of inaccessible heights and distances, etc., are solved.

HISTORY.

The history should be so taught as to make use of the studies of geography, literature, economics, civics and similar subjects. The use of pictures will be an important aid in bringing the architecture, sculpture and painting of past ages before the pupil. Outline maps for constructive work, material for additional reading and for the preparation of topical reports are essential; written work should be required; and note-books kept.

Ancient History—The work in ancient history commences with a brief introductory study of the Eastern nations, followed by a more intensive treatment of Greece and Rome and the early middle ages to 814 A. D. In the survey of Oriental nations special emphasis is laid on the main characteristic features of their commercial, economic and political progress and the influence which these have had on later times.

Greek History should be made as concrete as possible, the aim being to give the pupil a vivid conception of the Greek life and culture, and emphasis may be placed on their political, social and economic development. The growth of trade and commerce and the many sided civilization of the Greeks should be adequately treated. Biography and pictures are useful in making the details of Greek civilization more concrete, but it should never be overlooked that they are but means to an end.

If the constitutional side of Greek progress has been treated the pupil will receive the indispensable foundations for all future historical study. He will notice the similarity between Greece and Rome, and he will have little difficulty in understanding how the great Roman Empire came to be. The organization of the world state, and the method of extension of Roman civilization should receive careful attention. Contrasts should be made between the differences of physical environment of Greece and Rome, and the consequent changes which these have occasioned in their commercial, economic and political growth. General statements should be avoided as far as possible, and everything should be made vivid by the use of concrete facts and illustrations. From these facts the pupil may draw conclusions for himself; and thus receive training in deliberation and forming judicial judgments. A small amount of investigation and research work may be done in the collecting of concrete data. In connection with the constitutional development of Rome the pupil will become acquainted with Roman law, which has been made the basis of law on the continent of Europe. By continuing Ancient History to 814 A. D., the pupil does not get that false notion of classical history as a thing apart, but he sees the idea of a Roman empire still persisting in the minds of men and profoundly influencing future development. In this way he learns the essential continuity of history, of the play and interaction of forces which are slowly and gradually transforming civilization. The treatment of the early mediaeval period will necessarily be brief, and time will only be found for the consideration of the Barbarian invasions, the laws and customs and the rise of the

Christian church and of Mohammedan civilization, and the growth of the Frankish power to its culmination under Charlemagne.

In teaching history it is essential that the students get into the habit of using and drawing maps. The effects of the physical environment in shaping events should be constantly kept in mind.

Reference books for teaching History:

Baume—History and Civics.

Hinsdale on Teaching History.

C. K. Adams—Manual of Historical Literature.

Medieval and Modern History—The first semester's work begins with the period of Charlemagne and ends with the Peace of Westphalia—1648. In this period the elements in the civilization, which have influenced modern life and thought, should be emphasized:—

1. Supremacy of the church, and its many sided activity;
2. Norse invasions and effect on countries invaded;
3. Feudalism, (a) king and castle, (b) knight and castle, (c) Feudalism and the church, (England the exception in Feudalism and church history);
4. Beginning of nationality;
5. The four leading crusades and their influence upon the church, and upon the political, the social, the intellectual, and the material progress and development of the European nations;
6. The Renaissance;
7. And the Reformation—when uniformity is lost and diversity is the rule.

In the second semester, briefly survey the first one hundred fifty years after 1648, emphasizing only the events bearing on constitutional history:—

1. Principle of expansion—going back to the 12th century to get basis of modern history, and discuss the new ideas which led to absolute monarchies;
2. Prominence of Spain and France, and the rise of Prussia and Russia;
3. French Revolution—Note carefully the constructive work done in the first three years, also the international relation of European states, and the doing away with absolute monarchs in France and Europe, and the rise of the Third Estate;
4. Nation States,—recent and contemporary Europe from the French Revolution to the present time:—rising democracy in politics and in industry; political federation; territorial expansion; marvelous growth in wealth and population.

English History.—The chief aim of English History is to lay the foundation for an intelligent comprehension of what American institutions mean as the culminating phase in the development of the world's history. To secure this end the study of the English nation should serve as a review and give new ideas of continental history. The chief attention should be given to the development of English political institutions considered with relation to the political status of Continental Europe. It must be continually held in mind that England is the mother of modern constitutional government, that by the force of example she has become the law-giver of all the nations. On account of the complexity and difficulty of the subject, a simple, direct and graphic treatment emphasizing the main struggles for political and civil privileges should be attempted. But the pupil should see at the same time that political progress is necessarily accompanied by, and keeps step with, the great social, industrial and literary movements, in short how the whole life of man was broadened and quickened as the years went by.

In order to bring out properly the meaning of the American Revolution the imperial expansion of England and the English colonial policy should receive careful attention. Time should also be given to the British empire as it exists in the present century, especially in the great self-governing colonies.

American History is taken up as an advanced subject, with the purpose of getting a clear idea of the course of events in the building of the American republic and the development of its political ideas. Its chief objects should be to lead the pupil to a knowledge of the fundamentals of the state and society of which he is a part, to an appreciation of his duties as a citizen, and to an intelligent, tolerant patriotism.

It is not desirable that more than one-fourth of the year be devoted to colonial history. The period should be viewed as a chapter in the expansion of England and English history must constantly be referred to. Pay much attention to the establishment of industrial conditions and of habits of industrial activity as explaining political differences in subsequent times, especially as explaining the divergence of North and South after constitutional union had been formed. Pay but slight notice to military campaigns in any portion of the study, though the importance of inter-colonial wars should not be underestimated, nor the main facts of other wars, especially, the Revolution and the Civil war be neglected.

While the chief aim should be to give the pupil knowledge of the progress of political institutions, ideas, and tendencies, the pupil should also know the economic phases of life; therefore, whenever possible, direct attention not only to economic and social conditions, but also to economic and social developments; and those economic, industrial, or social modifications should receive chief attention which have permanently altered social organization, or have become imbued in institutions, ideas, or governmental forms.

The teacher should bring out the full importance of the fact that Virginia grew tobacco and South Carolina rice, and that the New Englanders were fishermen and traders; the class should clearly recognize the meanings of slavery and white servitude, of cotton and the sugar trade, of the steamboat, of the cotton gin, of the railroad, the telegraph, the rotary press, the sewing machine.

Too much attention can not be paid to the biographical side.

Special notice should be given to the great American leaders. Note-books should be required for maps and notes on collateral readings.



CIVICS.

The course in American history is supplemented by a semester work in civics.

A knowledge of the fundamental institutions of the land is indispensable to every citizen. Great care should be taken not to treat the subject in a meaningless, routine manner, for every part possesses a life which more or less affects our every-day existence. Let the teacher make the branch a practical one, losing no opportunity of bringing out its full meaning by the application of current history or local events. In this way an interest will be excited, and more than all, the great object in the teaching of civil government will be more nearly attained, viz., to create law-abiding citizens. The young people must early learn the duties of the citizen and the individual responsibility of that citizen toward maintaining a stable government for the nation.

Somewhat more than half of the course is devoted to (1) a brief preliminary study of the nature and origin of civil society, some fundamental notions of law and justice, and like matters; followed by (2) a very careful study of local and state government. The township, county, village, municipality and state are each in turn taken up and studied in their historical and local bearing. City government is treated, placing copies of the city charter in the hands of the pupils.

The subject is given much assistance by literary societies in connection with the schools, which provide for debates upon important local and national questions, for mock courts, and mock legislative assemblies. Opportunity is also taken to study the subject at first hand through visits to the county and city offices and the county board, the city council, voting precincts, nominating caucuses and conventions.

The remainder of the time is given to a formal study of the constitution and the workings of the national government. Fiske's, and James & Sanford's are the texts used.



ECONOMICS.

The aim of economics in the high school should be to enable the student to locate himself in the existing industrial order, and to give him the freedom of an intelligent actor in it.

The course includes: (a) an observational study of some of the fundamental facts about the structure and function of the existing economic system; (b) the consideration of a sufficient number of the facts of industrial history to make the fact of the evolution of the present system a reality to the student; and (c) an elementary statement of some of the most fundamental principles in accordance with which the present system now works.

Thus the class should devote the first month of the course (a) upon concrete observation, and classification, and interpretation of data. The series of exercises given in Thurston's text is used as the basis of this part of the course.

The following six weeks the class devotes to (b) which embraces a brief study of industrial history. Beginning with the family methods of production, the growth of the present industrial order is traced through the guild, domestic and factory system, to the present system of combination. Material for the first three stages of industrial evolution is drawn chiefly from European sources, while for the last two,—the factory and combination or consolidation systems,—American history abounds in illustrations. The causes which produced successive stages of industry is analyzed and the relation of each system to its contemporary social order pointed out. Pupils thus gradually learn to realize that our industrial, social, political and other institutions differ with time, circumstance and place. Thurston, *Introduction to Economics* is also used as a text in this part of the work. Much collateral reading is required in such texts as Gibbins', Cunningham's and Wright's *Industrial histories*.

The second half of the course involves (c) a study of the production, exchange, distribution and consumption of wealth. Pupils should gain definite conceptions of terms like production, capital, labor, value, interest, etc. Special care should be taken not to leave pupils with the impression that great world-wide problems can be expressed and solved in dogmatic definitions. Nowhere is a largeness of view and open-mindedness more essential than here. The United States census and other statistical works afford ample illustrative material by means of which class discussions can be made concrete. The publications of the state and federal departments of labor and many other government publications can be used with profit. Roscher's statement that the point of departure, as well as the aim of economic science, is man, should not be forgotten. The final test of economic life is human welfare. Ely's and Bullock's texts are used in this part of the work.

PHYSIOLOGY.

The course in physiology shall cover in a general way, the work outlined in Walker's Physiology. The course should be made as objective as possible, special emphasis being given to diagramming organs and systems at the time they are studied. Suggestive experiments should be performed by the teacher and the student should be taught to observe the physiological process carried on in his own body.

The work should give the student a clear idea of the living body, the divisions of bodies into organic and inorganic, into plants and animals, of what is meant by the structure of a body, anatomy, physiology, hygiene, cell tissue, membrane, gland, muscle, tendon, blood vessel, nerve, lymphatic, bone, and joint. There should also be a clear idea of the kinds of work done in the body and of the systems by which it is accomplished.

The study of the digestive system should include, (1) Foods—what constitutes foods and the classes of foods that are taken into the system; (2) the system as a whole, including the function and structure of all its organs, the mouth, tongue, teeth, salivary glands, pharynx, esophagus, stomach, pancreas, liver, small intestine, and large intestine; (3) the two routes by which the digested food enters into circulation; and (4) the laws of hygiene of the system.

In connection with the circulatory system a study should be made of the system as a whole, the function and structure of the organs of circulation including the heart, arteries, capillaries and veins. The student should be taught the structure, composition and function of the blood and to explain by diagram, the pulmonic and systemic circulation, to show the changes which the blood undergoes in the lungs and capillaries, how animal heat is produced and how regulated, and what is meant by congestion, inflammation, a cold and a fever.

A study of the respiratory system should include a knowledge of the purposes of respiration, the structure and function of the organs of the system, the movements of respiration, the chemical changes which result from it, including a study of the gases of the atmosphere, especially oxygen and carbon dioxide, the consequent importance of ventilation, and Nature's provision for keeping the air pure.

The following secretory organs should be studied together with the function of their secretions: mucus and serous membranes, synovial membrane, salivary glands, lining membranes of the stomach and intestines, liver, pancreas, oil glands, lachrymal glands and the lining of the ear.

The study of the absorbent system should include the methods by which the waste matter is taken from the tissues and expelled from the body as perspiration, and by the lungs and kidneys. In this connection, a study should be made of the skin, its structure, appendages and functions.

As a result of the work on the osseous system, students should be able to give composition, structure, classes and uses of the bones;

the parts of the skeleton in the head, trunk, upper and lower extremities; means by which parts of the skeleton are united, kinds of joints, and the hygiene of the bone, especially with relation to children.

For the muscular system there should be a knowledge of the structure, function, general arrangement, position and attachment of muscles, together with rules of hygiene in connection with exercise and rest.

As a result of the study of the nervous system the student should be able to show the necessity of a nervous system, to diagram in a general way the cerebro-spinal and sympathetic nervous systems, to describe the two kinds of nervous tissue and functions of each, to illustrate and explain what is meant by impression, sensation and reflex nervous action; to diagram and state the function of the parts of the brain and spinal cord, to describe by diagram the crossing of the nerve fibers in the cord and the medulla oblongata and to show the effect of injury to either side of the brain or spinal cord and to trace the course of the nerve current in reflex action; to show the knowledge gained through the senses acting alone and to diagram the nerves of the eye and ear, describing by means of diagram acts of hearing and seeing and to show reasons for defective vision and hearing.

The student should get a clear notion of the action of alcohol and narcotics upon the human body.



PHYSIOGRAPHY.

The course in Physiography is arranged to cover the outline below. The time is divided between laboratory work and the study of the text-book.

At the end of the course a note-book is required of every student containing a complete record of all observations and the results, with the student's own conclusions. The subject is made the opportunity for an introduction to the more advanced sciences, viz: Physics, Chemistry and Biology. The student is shown many experiments illustrating the phases of those subjects and their application to Physiography. It is believed that this prepares the student for the more difficult sciences.

Considerable apparatus is used in the presentation of the subject.

The Earth as a Globe.

Shape of earth, how proved, consequences of shape.

Size; how measured; effects of size.

Rotation: character of motion; latitude, longitude and time.

Revolution: rate, path; direction and the consequences.

Magnetism: compass, poles, variation.

Map projection.

The Ocean.

Form, divisions, and general characteristics of the ocean.

Depth, density, temperature of ocean waters.

Characteristics of ocean floors.

Distribution of life in oceans.

Movement of ocean waters:

Waves—cause and effect.

Currents—causes, proofs of cause, important currents, effects of currents.

Tides—character of motion, cause of tides, variation of tides, bores.

Work of the ocean.

Classes of shore lines and importance of shore lines.

The Atmosphere.

Composition and offices of atmosphere.

Instruments used in study of atmosphere.

Temperature.

Source and variation of atmospheric temperatures

Isothermal charts of world, January and July, with special study of isotherms of northern and southern hemispheres, of location of heat equator, of cold pole, of crowded isotherms, etc.

Pressure.

Measurement of pressure.

Use of pressure in altitude determinations.

Relation to temperature.

Study of isobars on U. S. Weather Map.

Distribution of pressure over world in January and July.

Relation of isobars to isotherms.

Circulation of atmosphere.

Winds, classes, directions, causes, effects.

Moisture.

Source, forms of, measurement of, precipitation.

Storms.

Paths and characters of storms of United States.

Daily weather at different seasons.

Relation of storms to general weather conditions.

Relation of weather to climate.

The Land.

Several features of land as compared with ocean.

Distribution of land.

Map representation of topography.

Changes in land forms, effects of elevation and depression.

Plains.

Kinds of plains.

Characteristics of different kinds.

Development of plains.

Coastal plain of eastern United States in parts.

Alluvial plains, their formation and importance.

Relation of life conditions to different forms of plains.

Plateaus.

Young plateaus.

Dissected plateaus.

Old plateaus.

Broken plateaus.

Mountains.

Block mountains.

Folded mountains.

Domed mountains.

Massive mountains.

Volcanoes.

Distribution.

Character of, at different stages.

Rivers.

Life history of river—work of rivers, topography of valleys at different stages, lake and lake basins.

Revived rivers.

Drowned valleys.

The great drainage basins of the United States.

Glaciers.

Existing ice sheets.

Kinds of glaciers.

Work of glaciers.

Characteristics of glaciated area of northern United States.

Summary.

Relation of man, plants and animals, to climate, land forms, and oceanic areas.

CHEMISTRY.

Chemistry is an art as well as a science. Acquaintance with its elements includes ability to do certain things intelligently as well as remembrance of the bare results of chemical changes. An organized account of the latter is only a sort of dessicated residuum if it is not illuminated by the experience acquired along with skill in the former. The books usually—and necessarily—give prominence to the second (the systematic aspect), leaving instruction in the art to the teacher. A requirement in chemistry, on the other hand, must emphasize the art, for it is universal. It will lay less stress on any particular list of substances, reactions, or topics, in view of the extent of the available material, the briefness of the school course and the consequent differences between equally good individual selections. The art cannot, of course, be acquired without a fair systematic knowledge, while a semblance of the systematic knowledge may be acquired without the art. The art is therefore more worthy of emphasis.

It will be noted that the art of chemistry consists in the practical knowledge of the physical properties of all kinds of matter and the utilization of this knowledge in arranging intelligently the conditions before chemical change, in noting all physical indications during experiment and distinguishing the significant ones, and in interpreting the result of this observation. It thus deals almost exclusively with physical conceptions and facts. It demands, therefore, a careful training in physical facts, physical observation and physical inference. Conventionalized chemical work which can progress without skill in this art (for example, reiterated observation of precipitations) is valueless.

Disregarding questions of order, and simply classifying the essential principles of instruction, the pupil should be taught:

1. Technique of experimentation.

Properties of common apparatus in respect to structure and material. For example, how to make an apparatus air-tight and why. Object of such operations as washing and drying gases and how the object is attained.

Physical properties which may be used for recognition of each substance and for explanation of all observations.

Judicious use of proportions and materials. Influence of conditions (temperature, homogeneous and heterogeneous mixture, etc.) on chemical change.

2. Physical phenomena, their recognition, description, and physical interpretation.

3. The more strictly chemical application of the results. For example, inference in regard to the nature of the chemical change which must have led to the results observed. Making of the chemical equation from adequate data.

The material basis for the above may be found for the most part in the employment of a restricted number of elements and a few of their

chief compounds. Facts should be simplified and systematized by generalization, and generalizations ("laws") should be illustrated and applied to familiar things. The usual theoretical explanations should be given as the facts accumulate. Laws and theories derive their importance from the facts, not vice versa, and none should be given unless and until the corresponding facts have been encountered in laboratory or class-room experiments.

A knowledge of important chemical industries and ability to work simple problems will be expected.



PHYSICS.

The work in physics should include:

- (a) Individual laboratory work, comprising at least thirty-five exercises selected from a list of sixty or more, not very different from the list given below.
- (b) Instruction by lecture-table demonstrations, to be used mainly as a basis for questioning upon the general principles involved in the pupil's laboratory investigations.
- (c) The study of at least one standard text-book, supplemented by the use of many and varied numerical problems, to the end that a pupil may gain a correct and comprehensive view of the method of physical science.

Mechanics and Hydrostatics—Weight of unit volume of a substance; Lifting effect of water upon a body entirely immersed in it; Specific gravity of a solid body that will sink in water; Specific gravity of a block of wood by use of a sinker; Weight of water displaced by a floating body; Specific gravity by flotation method; Specific gravity of a liquid (two methods); The straight lever: first class; Center of gravity and weight of a lever; Levers of the second and third classes; Force exerted at the fulcrum of a lever; Errors of a spring balance; Parallelogram of forces; Friction between solid bodies (on a level); Coefficient of friction (by sliding on incline).

Light—Use of photometer; Images in a plane mirror; Images formed by a convex cylindrical mirror; Images formed by a concave cylindrical mirror; Index of refraction of glass; Index of refraction of water; Focal length of a converging lens; Conjugate foci of a lens; Shape and size of a real image formed by a lens; Virtual image formed by a lens.

Mechanics—Breaking-strength of a wire; Comparisons of wires in breaking tests; Elasticity: stretching; Elasticity: bending; effect of varying loads; Elasticity: bending; effect of varying dimensions; Elasticity: twisting; Specific gravity of a liquid by balancing columns; Compressibility of air: Boyle's law; Density of air; Four forces at right angles in one plane; Comparison of masses by acceleration test; Action and reaction; elastic collision, Elastic collision continued: inelastic collision.

Heat—Testing a mercury thermometer; Linear expansion of a solid; Increase of pressure of a gas heated at constant volume; Increase of volume of a gas heated at constant pressure; Specific heat of a solid; Latent heat of melting; Determination of the dew-point; Latent heat of vaporization.

Sound—Velocity of sound; Wave-length of sound; Number of vibrations of a tuning-fork.

Electricity and Magnetism—Lines of force near a bar magnet; Study of a single-fluid galvanic cell; Study of a two-fluid galvanic cell; Lines of force about a galvanoscope; Resistance of wires by substitution: various lengths; Resistance of wires by substitution: cross-section and multiple arc; Resistance by Wheatstone's bridge; Specific resistance of copper; Temperature-coefficient of resistance in copper; Battery resistance; Putting together the parts of a telegraph key and sounder; Putting together the parts of a small motor; Putting together the parts of a small dynamo.

BIOLOGY.

The course is designed to include those topics that are considered fundamental. Individual laboratory work by the student is required and receives double the amount of time given to the recitation. A note-book with complete notes and drawings is prepared by each student. A good library is used in reference work and frequent trips are made to the regions around Superior. One year is devoted to the subject, being divided so as to cover the following outline:

Zoology.

A study in the laboratory of the following forms:—

Protozoa—
Amoeba.
Paramoecium.
Vorticella.

Porifera—
Sponges.

Coelenterata—
Hydra

Echinodermata—
Star-fish.
Sea-urchin.

Vermes—
Earth worms.

Mollusca—
Clam.
Squid.

Orthropoda—
Cray fish.
Grass-hopper.

Vertebrata—
Frog.

Botany—

Part I. The general principles of (a) Anatomy and Morphology, (b) Physiology and (c) Ecology.

a. In Anatomy and Morphology.

The Seed. Four types (dicotyledon without and with endosperm, a monocotyledon and a gymnosperm); structure and homologous parts. Food supply; experimental determination of its nature and value. Phenomena of germination and growth of embryo into a seedling (including bursting from the seed, assumption of position and unfolding of parts).

The Shoot. Gross anatomy of a typical shoot, including the relationships of position of leaf, stem (and root), the arrangement of leaves and buds on the stem, and deviations (through light adjustment, etc.) from symmetry. Buds, and the mode of origin of new leaf and stem; winter buds in particular.

Specialized and metamorphosed shoots (stems and leaves).
General structure and distribution of the leading tissues of the shoot; annual growth; shedding of bark and leaves.

The Root. Gross anatomy of a typical root; position and origin of secondary roots; hair-zone, cap and growing point.

Specialized and metamorphosed roots. General structure and distribution of the leading tissues of the root.

The Flower. Structure of a typical flower, especially of ovule and pollen; functions of the parts.

Comparative morphological study of six or more different marked types, with the construction of transverse and longitudinal diagrams.

The Fruit. Structure of a typical fruit, especially with reference to changes from the flower, and from ovule to seed. Comparative morphological study of six or more marked types, with diagrams.

The Cell. Cytoplasm, Nucleus, Sap-cavity, Wall. Adaptive modifications of walls, formation of tissues.

b. In Physiology.

Role of water in the plant; absorption (osmosis), path of transfer, transpiration, turgidity and its mechanical value, plasmolysis.

Photosynthesis; dependence of starch formation upon chlorophyll, light and carbon dioxide; evolution of oxygen, observation of starch grains.

Respiration; necessity for oxygen in growth, evolution of carbon dioxide.

Digestion; digestion of starch with diastase, and its role in translocation of foods.

Irritability; Geotropism, heliotropism and hydrotropism; nature of stimulus and response.

Growth; localization in higher plants; amount in germinating seeds and stems; relationships to temperature.

Fertilization; sexual and vegetative reproduction.

c. In Ecology.

Modifications (metamorphoses) of parts for special functions. Dissemination.

Cross-pollination.

Light relations of green tissues; leaf mosaics.

Plant Societies; Mesophytes, Hydrophytes, Halophytes, Xerophytes; Climbers, Epiphytes, Parasites (and Saprophytes), Insectivora.

Plant Associations, and zonal distribution.

Part II. The Natural History of the Plant Groups, and Classification.

A comprehensive summary of the great natural groups of plants, based upon the thorough study of the structure, reproduction and adaptations to a habitat of one or two types from each group, supplemented and extended by more rapid study of other forms in those groups. Where living material is wanting for the latter, preserved material and even good pictures may be used, and a standard text-book should be thoroughly read. The general homologies from group to group should be noted.

In general in this part of the course much less attention should be given to the lower and inconspicuous groups, and progressively more to the higher and conspicuous forms.

Following is a list of recommended types from which, or their equivalents, selection may be made:

- a. Algae, *Pleurococcus*, *Spharella*, *Spirogyra*, *Vaucheria*, *Fucus*, *Nemalion* (or *Polysiphonia* or *Coleochaete*).
- b. Fungi. Bacteria, *Mucor*, Yeast, *Puccinia* (or any Powdery Mildew), Mushroom.
- c. Lichens, *Physcia* (or *Parmelia*).
- d. Bryophytes. In *Hepaticæ*, *Radula* or *Porella* or *Marchantia*. In *Musci*, *Mnium* (or *Funaria* or *Polytrichum*).
- e. Pteridophytes. In *Filicineæ*, *Aspidium* or equivalent, including, of course, the prothallus. In *Equesetineæ*, *Equisetum*. In *Lycopodineæ*, *Lycopodium* and *Selaginella* (or *Isoetes*).
- f. Gymnosperms. *Pinus* or equivalent.
- g. Angiosperms. A monocotyledon and a dicotyledon, to be studied with reference to the homologies of their parts with those in the above groups; together with representative plants of the leading subdivisions and principal families of Angiosperms.

Classification should include a study of the primary subdivisions of the above groups, based on the comparison of the types with other (preferably) living or preserved material. The principal subdivisions of the Angiosperms, grouped on the Engler and Prantl system, should be understood.



COMMERCIAL SUBJECTS.

The purpose of this course is to supply facilities for the training of pupils who desire to enter business careers. It is to give a knowledge of the structure and workings of the industrial organism which will enable them to attain a higher degree of social and industrial efficiency than is possible for the average man who goes into business without such preliminary training.

It is also the purpose of this course to equip pupils with the basic principles and methods of technical knowledge needed for the performance of the manifold processes of industry and commerce.

Commercial Arithmetic.

This course is intended to meet all the requirements of commercial calculations. It should not only contain the theories and principles which underlie arithmetical computations, but should aim to render the pupil expert in applying them to practical work. Accuracy and rapidity are essential in business. The pupil should be taught to use his judgment as well as his memory in solving problems. The man of business does not meet his problems carefully labelled. He must make himself master of principles and use common sense in their applications. Realizing this fact the teacher should offer such problems for solution as the pupil will be likely to meet in practical life.

Before working an example the pupil should study its statements in all their relations to each other and, reasoning from the nature of the case, obtain an approximate answer.

Short methods should be introduced to a limited extent only. In cases where their application does not impair clearness they are permissible.

Bookkeeping.

The time devoted to bookkeeping is one year. Bookkeeping is primarily placed in the course to supply the demand for practical instruction in common affairs of business life.

The value of the study depends largely on the system used and the manner of treatment; also upon its direct relation to actual business conditions. It should be a record of business transactions just performed by the pupil. No two sets of books should be alike. Then the pupil realizes that success depends upon his own individual effort. His cash must equal the amount called for by his books, his trial balance must be able to stand the test in regard to all affairs of his business. The various forms of business paper, checks, drafts, notes, loans and the methods of business transactions must be made to assume a definite meaning.

Commercial Geography.

The aim in this course is to give the pupil a knowledge of the earth as an agent in the production of commodities upon which human life depends. It should give an account of the physical features, the products, and the trade of the United States in particular, also a more general view of these for the world at large, and in dealing with other

countries emphasis should be laid on their trade relations with the United States. The commerce of each country should be treated under the following heads: First, the physical basis; second, the people; third, the products; fourth, the trade. The present conditions of trade should be made clear, but with attention fixed primarily on the physical law and facts by which it is influenced. To understand the relations of geography and commerce, the various industries and occupations of men must be studied in the light of their dependence upon physiographic surroundings. It includes not only the physical environment, but the human element as well. Emphasis should be put upon interactions which are an outcome of the relationship of man and nature. The three basal interests are production, transportation and consumption.

I. Principal of World Trade:

- (a) Division of labor among nations of the world at large. Illustrate by division of labor in the community.
- (b) Manufacturing interests characterize nations of temperate zone, while raw material is a leading interest of tropical peoples.
- (c) The presence of water power and of coal and iron determine a manufacturing population. Raw material is drawn to manufacturing centers.
- (d) Aptitudes of different peoples for different kinds of industrial activities are an important feature in promoting the world's commerce.
- (e) The foreign trade of a country may be simply the expansion of its internal or domestic trade. The surplus of production, in either raw material or manufactures, becomes export. The exchange of the surplus for the needed commodities produced by a foreign country lies at the basis of world commerce.

II. Factors in interchange of commodities.

- (a) System of exchange bind on the respective value of goods.
- (b) Bring here a study of price, and standard of values.
- (c) System of banking and credit.
- (d) Definite system of weights and measures.
- (e) Transportation of goods by ship and rail.
- (f) Facilities for communication by telegraph and cable.
- (g) Metric system.

III. Trade routes:

- (a) Trans-Atlantic route, Mediterranean route, Pacific Ocean route, Cape Horn route, Cape of Good Hope route.
- (b) Canals—Suez.
- (c) Railroads.

IV. Growth of great commercial cities in trade routes.

Commercial Law.

This course is designed to show how the rules of law, governing ordinary business transactions, have been developed and to tell what they are. It should give the pupil a fair acquaintance with those legal principles and ideas which are involved in the common affairs of business and help him to avoid business pitfalls and to know when to seek legal advice. Further, it should declare to him the meaning of legal terms used daily in conversation and newspapers, show him how to

make, indorse and use checks and other forms of negotiable paper; teach him his rights against hotel-keepers, common carriers and many others, as well as to give him much useful information about the purchase and sale, the transfer and conveyance of land and of personal property.

- I. Nature and origin of law.
- II. Law merchant and common law.
Studied as sources of modern business law and stages of development.
- III. Contracts.
- IV. Agency.
- V. Bailments: Including the obligations of inn-keepers, common carriers and telegraph companies.
- VI. Bankruptcy and insolvency.
- VII. Insurance.
- VIII. Negotiable paper.
- IX. Partnership—joint stock companies, corporations.
- X. Property—Its acquisition and transfer.
- XI. Sales of personal property.

References:

Black's Constitutional Law.
 Wisconsin Session Laws, 1899.
 West's "Ancient History" (Rome).
 Jenk's "History of Politics."
 Green's "Short History of English People."
 Robinson's "Elementary Law."

Commercial History.

The commercial growth of individual nations and an understanding of the forces which have contributed to the steady expansion of the world's trade should be presented in a systematic manner. The fact that a nation's commerce is born of its industry and is a part of its struggle for the necessities, comforts and luxuries of life should be made clear to the pupils.

The study embraces:

- I. (a) A general view of the agriculture and the manufactures of various peoples will enable the pupil to understand their commerce.
- (b) The physiographical aspect of commerce.
- (c) Great trade routes should be noted at different periods, the successive marts which have served as commercial centers and the causes which have shifted these routes and centers.
- (d) Touch upon the growth of a medium of exchange.
- (e) History of colonization.
- (f) The industrial organization of various peoples and periods.
- (g) Growth of trading companies.
- (h) Organization of capital.
- (i) Influence of slavery.
- (f) Great geographical discoveries and great inventions which have increased production and facilitated communication and transportation.
- (k) The influence of aesthetic tastes, religious beliefs and rivalries, such customs, and varied teachings upon human demands.
- (l) The attitude of various religious and church organizations towards commerce as a factor of those demands.
- (m) The influence of difficult economic theories.

II. Relation between commercial and political history:

- (a) National policy influenced by commercial considerations.
- (b) Commercial motives fundamental in making political alliances.
- (c) Commercial relations lead to growth of the body of international law.
- (d) Influence on constitutions and cost reforms.

III. Oriental, Greek and Roman (avant) commerce should be given but little time. Special attention should be paid the "Phoenician and Carthaginian" Period.**IV. Medieval commerce,—Venice, Genoa and Pisa:**

- (a) Increase of field of commerce and variety of articles made and exchanged.
- (b) Commercial routes of this period.
- (c) Influence of church as development of commerce.
- (d) Rise of the "Protection System."
- (e) Rise of merchant and craft guilds.
- (f) Development of "Fairs" and "Markets."
- (g) Development of banking and credit.

V. Influences.

- (a) Standard of living ruined.
- (b) Wealth gave men leisure and opportunity to attain culture—brought culture of the east westward.
- (c) Effective force in overthrowing feudal system.
- (d) Served in bringing about ultimate constitutional recognition of principle of political equality.

VI. Modern Commerce:

- (a) Important influence of Renaissance inventions of gunpowder, compass and printing press.
- (b) Opening up of the new world.
- (c) New trade routes (Cape of Good Hope).
- (d) Special reference to Portugal, Spain and Netherlands.

VII. Age of Steam:

- (a) English industrial revolution—causes, etc.
- (b) Growth of factory system, and means of transit.
- (c) French revolution and its effects on commerce.
- (d) England and effect of free trade, she became the great dock of all countries.
Colonial expansion and its influence in expanding trade.
- (e) Growth of trade unions latter part of eighteenth and nineteenth century.
- (f) Special attention to Zollverein in Germany.

VIII. American Civics:

- (a) Economic basis of revolution, growth of agriculture and manufactures.
- (b) Development of Interstate commerce.
- (c) Tariff policy (protection).
- (d) Commercial treaties with England, France, Spain.
- (e) Reciprocity.
- (f) Industrial effects of slavery.

IX. Age of Electricity:

- (a) Cable telegraph, telephone, communication.
- (b) Rapid transit.

(c) Electricity—cause, change of methods.

(d) Concentration of capital and labor.

Text: "General History of Commerce."—Webster.

Sources:

1. Economic laws, ordinances and decrees of various countries.
2. Tariff and custom-house reports.
3. Commercial treaties and commercial claims in the treaties.
4. Parliamentary debates, reports of different countries and of government commissions.
5. Reports of chambers of commerce.
6. The market reports.
7. Trade journals.
8. Texts on economics.
9. Museum collections, especially moneys, utensils.

MANUAL TRAINING.

First Year.

Cabinet making and joinery.

Mechanical drawing based on machine construction.

Models—Stands, tables, chairs, chests.

Second Year.

Wood Turning. The use of the lathe and lathe tools. Models from home life requiring the use of the lathe. Original constructions using turned work.

Mechanical drawing—Models showing practical application of principles of steel construction in buildings and bridges.

Models—Candle sticks, handles, wheels, pulleys, etc.

Third Year.

Wood carving—The different types of carving based on the history of architecture.

Mechanical drawing related to architecture.

Types—Geometric, interlacing, wood engraving, Byzantine, Renaissance, etc.

Fourth Year.

Sheet metal work. Arts crafts work in copper. Practical applications of the problems of the sheet metal worker. Metal spinning.

Mechanical drawing—Orthographic projection, intersection of solids, the more theoretical and geometrical forms of the work.

SEWING.

First Year:

Machine sewing:—Care and use of sewing machine. Essay on "History of the Sewing Machine."

Cutting and making of undergarments.

Second Year:

Essay on, "History of Costumes."

Cutting and making a cotton shirt-waist suit.

Art needle work:—A variety of stitches applied to linen and flannel; initials and monograms; damask stitch; drawn work.

SOME INDICATIONS OF A GOOD SCHOOL.

External or Secondary.

1. Curtains evenly arranged or adjusted for best light.
2. Heat and ventilation adjusted so as to secure a temperature of 70 degrees. This is not to be neglected until the room is excessively cold or hot, or air poor.
3. Blackboards cleaned, at least no slovenly work left upon them.
4. Only best work by teacher and pupil to be found at any time. There is no excuse at any time for slovenly work. The teacher's work should at all times be a model for the pupil to follow. We frequently see much careless work.
5. The floor free from papers and no unnecessary dirt around.
6. No unnecessary material on desks and material not in use neatly put away.
7. Pupils' desks tidy and free from ink stains. A little attention is needed.
8. A well arranged program and the same carefully observed in the daily work. It is not good policy to let classes go over time so one class is stealing time from the next, except for some special purpose. The latter when only one teacher is concerned. It is unfair to hold a class when others wait.
9. Pupils attending to their own business, not sitting with feet in the aisle, or in lazy attitudes. A business attitude is wanted.
10. A neat, quiet, systematic way for calling and dismissing classes and the same observed by both pupil and teacher. We like the military style of exactness in movements. Movements should be simple but perfect.
11. Neat and tidy appearance on part of teachers.

Subjective or Primary.

1. Teacher should have a well defined lesson plan for the work of the day.
2. The plan for one lesson should contain but few teaching points.
3. The younger the pupils the fewer the teaching points.
4. The whole lesson should not be equally emphasized. All emphasis is no emphasis.
5. Not a silent but a talkative class. It is not the work of the teacher to recite but to conduct the recitation. This includes all proper explanations, but does not mean that the teacher is to do the pupils' work for him. (An unnecessarily talkative teacher usually has a silent class.)
6. A recitation conducted for the class and not for individual pupils.
7. Progressive work in the recitation, reached by clear cut and definite questions and thoughtful answers, pupils reciting within their perceptive powers. A recitation often befogs rather than clears the mind.
8. The end of the recitation should bring added knowledge, clear perceptive powers, a desire to investigate further, and a definite understanding as to what is to be accomplished in the next recitation.
9. Punctuation, capital letters, paragraphing, penmanship, composition, spelling, orderly arrangement, and general neatness should receive attention.

HOW TEACHERS WASTE TIME.

1. A lack in pursuing work methodically.
2. By not understanding that habits like weeds are not eradicated by partly pulling up. Crocodiles should be killed in the egg, not hatched.
3. Accepting poor work, thus lowering the standard of scholarship.
4. Permitting a partially learned lesson to pass, thus weakening those to come.
5. Failing to make proper explanations of lessons assigned.
6. Not making proper applications of things studied or taught.
7. Failing to study the motives that propel and guide children.
8. Keeping pupils on work that they already understand.
9. By narrowness in scholarship, thus failing to realize student instincts.
10. By not knowing whether it is knowledge, power, or skill that is to be imparted.
11. Failing to consider each day at close of school how much could have been eliminated from the day's work and have made the teacher's work easier and the pupils' better.
12. Repeating the question for the inattentive and the answer for the whole class.
13. Failing to cause the ordinary child to feel that he is capable of something better.
14. Failing to see that the teacher's personality enters into the life of the child.
15. Failing to properly cultivate the powers of observation and expression on the part of the pupil.
16. Memorizing words and sentences whose meaning are not known.
17. Failing to realize that opinions are based upon the point of observation.



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